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THE DOCTOR AND THE PUBLIC*

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It is with deep appreciation that I feel privilleged to act as spokesman for the medical profession of this State, especially as appertaining to the present condition of medicine and medical practice. The entire group of practitioners throughout the United State constitute but 15 out of every 10,000 of the population. Though their numbers be relatively small, they are as important to social welfare as the vastly greater numbers engaged in banking, marketing, industry and other factors.

This point may not be so well understood, even by physicians themselves. It is only in sickness that the doctor looms as an essential member of the community, and in times of epidemic and widespread catastrophe as well. If the hands of the profession were removed from society it would be like the loss of the safety valve or the breaking down of dams, leading to inundation of epidemic ruin. The future of medicine lies within the hands of every physician. The task of every member of organized medicine today is to know the trends in medicine, the present tendencies in health insurance and contract practice, and towards every other method which has for its object the profit of lay promoters and lay organizations in the health field, at the expense of the public and of the profession.

There are certain changes being proposed, based primarily on financial or economic distress instead of the good of the general public. There are clever industrial magnates who are trying to introduce mass production methods for our profession. Then there are politicians who are seeking to prescribe government medicine and to give us a paternal administration through the doctors' help. The lesson of life insurance and fraternal and mutual protection has not been a failure. The manager type of movement must arouse the physician's genuine concern, for it is based on the hope of profit, as is all insurance medicine. Scores of contract schemes have been evolved in which the middleman profits. Still, the movement is well under way for many insurance, industrial-contract, government, fraternal and other forms of medicine in America and abroad. The medical fee is usually dictated by the company; the physician often capitulates to the personal need of funds.

It should be realized in the clearest manner that the general practitioner is the backbone of the medical profession. The most colorful picture is that of the family doctor, the type who renders individual service, and not the man who is compelled to make a trade of it handling as many as fifty patients a day in a hasty way through some manager's office thus leaving the doctor in an exhausted state and unable to give personal consideration to each patient. Experience abroad proves that an army of lay workers exceeds the number of physicians employed, these being government employees who often direct the activities of the medical men in the field. However, high professional standards cannot survive the blight of bureaucratic control and politics. The highest type of manhood rebels at direction by political chicanery. Such changes as are needed ought to be worked out by the profession itself instead of being revolutionized by lay organizers. The men who are devoting their lives to the care of the sick in the respective communities and are con-

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stantly confronted with matters of life and death ought to be permitted to solve their problems through their own collective wisdom, whether through local, county, state or national associations of doctors and surgeons.

The profession has always been placed above commercialism, inasmuch as the service is a very human and vital one. Throughout the ages, the doctor has given freely when his aid and attention could not be purchased. Medical charity is something that is required by a goodly proportion of our people at present, this being a situation that will tend to be less a problem as the state of the country improves. It is estimated that 30 per cent of the population pays nothing for hospital services. In private practice as well, the medical profession gives freely.

The profession has been, notwithstanding, the target of severe criticism. The vast majority of physicians have shown the effort, progress and efficiency of scientific humanitarians. Medicine today is not a mere matter of dispensing doses. Such rapid progress has been made in the science, and specialization has proceeded with such a pace, that medical service has necessarily become more expensive in the fields of diagnosis, roentgen ray treatment, immunization and other departments requiring apparatus and aids, hospital treatment and nurses and the like, including further study and scientific research and attendance at clinics. The physician is obliged to take opportunities for reading, study and post-graduate courses. He also has to utilize laboratory facilities to allow him to practice his art as he was taught in the medical school and in the hospital, so as to arrive at correct diagnoses. Consequently he is obliged to call for some compensation if he is going to assure the public of the best in health guidance, prevention and care in illness, if he is to retain for himself a dignified and honorable position in the community.

Specialism has expanded beyond its primary forms in surgery to include internists, gynecologists, obstetricians, genito-urinary surgeons, pediatrists, orthopedic and neurologic surgeons, roentgenologists and psychiatrists, so that the universal mind of medicine is an almost impossible ideal. While specialism has been somewhat retarded since the early twenties, it is bound to come to its own in time. Nevertheless, thousands of general practitioners have had to install their own clinical laboratories and roentgen ray equipment as a natural defence program. All this investment is necessary if the doctor is to give the best type of service that is in him, not acting in an empirical fashion. Only astute physicians can hope to offer to the public this modern type of service at a profit, not to speak of great loss at times. The physician must always be the central figure in medical practice, being glorified by the public for his skill and diligence. The present adverse cycle out of which the country is upturning cannot be permitted to bankrupt these devoted practitioners. It is conceivable that if general business, upon which medicine depends for its service payments, does not greatly improve, that practitioners can not afford to give the best type of public helpfulness. People will insist upon advanced types of medical service though they draw back at the costs, an attitude which is but natural, for it is only the way of the people who need to know more about the resources of knowledge and skill that have to be drawn upon to safeguard life and health.

Diagnosis today still has much to learn, as for example carcinoma of the stomach, which has a latent period of six months, and other incipient internal malignancies. Duodenal ulcer has a history of seven years; there is gastric ulcer and chronic cholecystitis, and the long history of myocarditis. The progress of chronic disease is a chain of events that depends on glandular imbalance. Renal and cardiac disease usually do not occur alone. Chronic infection is indicated somewhere, and the effort is to find the systemic solution, rather than keep on pulling teeth and extracting gall bladders and tonsils. The great problem today is to arrest infection. We feel that sooner or later we shall be able to cure or to control cancer. The constant struggle of the ages is against the germs of disease, the bacteria that are the cause of many low grade infections of the nerves, the seat of vascular disease and of cardio-renal organs and the intestines. Credit is due the labors of Koch and Pasteur and

other heroes of the microscope and of self-experiment, a story which has been well told in books and even on the screen today.

For example, typhoid, cholera, paratyphoid, smallpox have been almost eliminated through preventive inoculation. There are controls for tetanus and gas gangrene. Much was accomplished during the World War by preventing diseases which were scourges of the human race. Malaria was controlled by treating polluted water and by quinine. Diphtheria is practically off the map in this country, and scarlet fever since 1923-24 has been much reduced. Colon infection has been treated with a bacteriophage. Bacterial treatment is of great importance, and one needs a bacteriologist in getting at infections like cholecystitis, and overwhelming the organism with large doses. It is for the physician to make a thorough diagnosis, take the patients into his confidence, educate them in matters of diet and exercise and the elimination of infections and then use the various weapons of modern medicine.

Yes, many a patient spends far more on his automobile parts than to his medical advisor. One cannot buy new parts for the human body, however, and it is the physician's duty to teach him how to run his bodily engine economically. The physician can detect danger signals before the patient is sensible of them. If there is permanent damage, the doctor can determine how far underlying cause may be controlled and then plan a careful existence for the patient. Many patients are in the cardio-renal group, and a thoughtful physician can give invaluable advice. Under the laws of the state, live stock is very well protected from disease and the agriculture department is particularly careful of plants not being infected. There is the same need for attaining a better consideration for human beings, particularly the children whose natural inheritance of joy and freedom is often robbed by disease and infection. It is the physician who is the custodian of that essential of race existence, the children who inherit ours.

During my many years of personal contact with doctors, I have never known an instance where there was a refusal to answer a call for fear of danger to himself. He hastens to relieve misery without asking the terms and conditions, being distinguished by unselfishness of conduct much of it not witnessed in the profession of law, for example. More than one physician has lost his life while ministering to the needs of the insane. We are familiar with the heroism of Dr. Lazear of yellow fever fame. Others have risked lives in investigating Rocky Mountain fever by proving it to be conveyed to man by an infected tick via an animal; also verrugas and bubonic plague, other doctors being martyrs to Malta fever and glanders and spotted fever. There are nearly 200 doctors who have suffered agony as a result of working with roentgen ray and radium treatments. Yes, medicine is truly a progressive science, but do the good people of Louisiana understand that progress is made through suffering and labor. Modern medicine advances through achievements by individual doctors in overcoming the fatal diseases of former days, such as typhoid, diphtheria, yellow fever and others I have named, most of them having been overcome in the last half century. Cancer, however, remains unconquered, and the death rate from heart disease is testimony to years of neglect by the public. The same holds true of tuberculosis, nine out of every ten children having been infected by the tubercle before reaching the age of twelve. Consider for a moment that nearly half of the people who die before the age of thirty have succumbed to some preventable disease.

There are two grand divisions of medicine, one being to prevent and the other to cure diverse diseases, yet they are related closely. One group acts with the weapons of sanitary science, public and private hygiene and immunization to bulwark the public health against invasion of disease, while the other acts at the bedside, at clinic and hospital to restore normal function. Pervading both groups are scientific research and methods that overcome prejudice through education and practical demonstrations in the field of preventive medicine. Every physician is a potential health officer with ability to perceive the common welfare as an object worthy of his constant study and effort.

However, the physician is not obliged to devote himself exclusively to the public good. He has a duty of self-interest and economic neces-

sity. If he fails to provide for his own household, he is not as well qualified to attend to the needs of the public, and the chances are that one so selfsacrificing will return to private citizenship. To this end, the progression should see that the character of medical service which its individual members render is properly and honestly rendered without discrimination, and at a cost within easy reach of every citizen. To meet these conditions is to merit public confidence. There are social strata which have to be ministered to and the poor, no less deserving than the rich, are desirous of the most scientific and skilled treatment, but the demand for medical service has to be met on a mutually fair economic basis.

I wish to indicate that the change which has taken place in medical practice in the last few decades has been from individual, independent practice to that which has a more public outlook. Good medical care is essential to public happiness and life in huge cities, and it seems to me that we should strive toward the care of all the people, regardless of distinctions of class. For the present, due to increasing luxury and comfort and amount of personal attention given to patients, one must invest more money, although one can arrive at the destination of health by a cheaper route. The best medical care may not be available to all the population at all times for the amounts they can afford to pay. Our main desire is the best medical care that may be given to the people. This is frequently offered by members of the medical profession at great sacrifice, but then a duty well fulfilled is compensatory.

The record of progress made since I began practice 30 years ago constitutes a period of unparalleled development in scientific medicine. We feel particular pride in the progress made since 1900, although that is not too distant a date from which to judge conclusively. We are, however, pretty far from the time when the chief stock in trade was made up of chicanery, superstition and personal magnetism. It is a far cry from the time when the man entering the practice of medicine just used his home furnishings, the drugs being simple and prepared by his wife and himself, there being none of the expensive pharmaceuticals in use now, no elaborate equipment being necessary, and his transportation being usually horse-drawn.

There was a time when quackery was rampant. There was merely a registration law requiring the applicant for a license to file his diploma with the county clerk, this proving a productive source of diploma mills, but under the provisions of the law, state boards have passed on the validity of colleges of medicine and on diplomas. The trend brought about by the increasing cost of medical education has led to the location of an increasing number of men in the large communities and cities rather than in the smaller country towns. Since a man has spent so much money on his education as the present student has to, he does not like the notion of settling in a usually hardbound and closely calculating community where the returns are frequently quite small.

The requirements are quite rigid, namely, six years of study after graduation from high school. Quite often the M. D. degree is not given until after a year of interneship in an approved hospital. The public ought to consider whether these medical practice laws are too rigidly drawn; whether we can reduce our expenses in setting up our offices; whether it is possible to reduce this overhead without sacrificing some of the quality of medical care. It is up to the profession to make these things known to the general public.

Thanks to these advances in knowledge of the healing art, the public has benefited in increased length of life and freedom from epidemics and other diseases. Progressive work has been done by the doctors with the most dreaded diseases of chilhood. The doctors have often been accused of self-interest in advising rural communities to be inoculated against the menace of bad water, against typhoid, and children against diphtheria and smallpox. Immunization against disease has made distinct progress, notwithstanding the opposition of cults and ignorance.

Not so many years ago, the sense of smell was used quite extensively to determine the presence of exanthemata. Medicine was practiced largely by the use of the five senses, plus the instruments and the few types of drugs the handbag contained. All that was thought es-

sential in those days was a suitable history and a careful physical examination. The hand was placed on different parts of the body to get the temperature. Today the laboratory period is established, and all of the cells, tissues, secretions and excretions of the human body are subject to microscopic test. Then the roentgen ray came along, to help the physician who depended on his listening to the rales within the chest and who could now observe the pathology that was responsible for the rales. Today, diagnosis has been improved a thousand-fold in accuracy through these means.

Organized medicine has the interest of the public more at heart than all of the so-called charitable organizations, and is far better able to know and to meet the needs of the public than is socialized medicine. In return for this remarkable familiarity with the mental and physical welfare of the community, the public should give the doctor and organized medicine their support. They ought to recognize that the so-called "high cost of medical care" is not actually such but is magnified and exaggerated, due to the fact that the average man or woman does not figure any costs for medical care in his or her annual budget of expenses.

It is always possible to argue from preconceived theories and to provide a panacea for the so-called high cost of medical treatment. Be this as it may, under any state scheme of wholesale treatment, the average doctor is underpaid and often overworked, and the average patient receives insufficient medical care, and such care as he does receive costs him too much. Speaking of health insurances, a "made in Germany" proposal, it is found that the mortality rates and morbidity figures in countries covered by such plans do not favorably compare with ours. Compulsory health insurance is statistically proved to be a questionable blessing. Space limitations compel me to make these bare statements, but the proofs can be furnished in detail. While the cost per workman is low the administration costs are high. The physician whose bread depends on the number of patients he can command gives little time to diagnosis and often overlooks organic lesions until it is too late.

Medicine, notwithstanding opposition, struggling and suffering, right through the ages, has managed to develop continuously the foundation on which it rests today, but we have to prop up this foundation upon an ethical basis and the spirit of the Hippocratic oath, realizing that only thus can the economic adjustment of medical services survive.

STANFORD EMERSON CHAILLE; DEAN, TEACHER AND FRIEND*

JOSEPH A. DANNA, M. D.
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My first meeting with Dr. Chaillé was on the day of my matriculation as a first year medical student. His erect bearing, straightforward manner in speech and action, and strong clear-cut features, gave me a first impression of strength of character, dignity and power that has endured to this day.

His first lecture impressed me with his serious interest in his subject and his desire to impart it, and I found myself trying to help him by close attention. There was nothing of the flashy orator about him, but he had a way of indelibly driving home a fact, a problem, or an object lesson.

One lecture he devoted to his relationship to us as Dean, and much of it had to do with our behavior when calling on him in his office, with special emphasis on the possible consequences of moving the famous chair on which the visitor sat. During the greater part of another lecture he gave the class a treat in the story telling line, going the full limit so far as spiciness of the stories went.

Though I followed him closely in his lectures and did fairly well in the quizzes, I never during this time got the impression of having become particularly wise. So when as I walked home after the final examination with several of my classmates, one of them began to recite what his answers to some of the questions had been, I felt sure I had failed. When a few days later Dr. Chaillé sent for me I knew the worst had happened. You may imagine my surprise, therefore, when instead of the severe Dean and Professor of Physio-

*Read before the Orleans Parish Medical Society, December 9, 1935, at the Chaille Memorial exercises.

logy, Hygiene and Pathological Anatomy, I was greeted by the friendly smiling Dr. Chaillé who shook hands with me and asked me to sit down in the famous chair. You may imagine my further surprise when he said that he had sent for me because he wanted better to know the student who had made the highest mark in his own branch.

From this time on we became great friends. I dropped in from time to time, some times for advice, often just to say hello. I usually left with a book, or a reprint of one of his articles. He never seemed to mind my dropping in and was always very pleasant and kind.

When I became an interne at Charity Hospital I was selected as the interne to look after the securing of cadavers for his weekly lectures on Pathological Anatomy. Some times these bodies had been set aside four of five days previously and kept in a poor specimen of an ice box, so you could smell things pretty strongly that day through the building long before you reached the upper amphitheatre. During the lecture hour I opened the body and removed the organs, and he picked each up in turn and commented on it. Gloves were unknown then, so we greased ourselves thickly with vaseline from finger tips to elbows and then went ahead. Dr. Chaillé wore his hair rather long, parted over to each side, and had a way, during the heat of his lectures, of running his hand through his hair. I was shocked on one occasion to see him do this with his vaselined hands stained with bloody cadaveric fluid.

That Dr. Chaillé's lectures had made their impress on me was further proved by the fact that my graduation thesis was entitled "Some Sanitary Needs of the City of New Orleans," a rather big subject, especially then, for an insignificant medical student. It earned me honorary mention, however, at the hands of my friend.

Dr. Chaillé was a dignified, lovable gentleman of the old school. He carried himself just as erect when I last saw him shortly before his death as when he wore his military uniform during the Civil War. He seldom actually laughed boisterously, but his stern strong face would occasionally light up with a glitter in the eye and a peculiar smile that habit and effort could not suppress and that seemed to ooze out in spite of him, and gave him a captivating and irresistible charm.

I never realized during the course of his teachings that I acquired my appreciable store of knowledge of his branch, but I have found myself frequently and repeatedly quoting him all these years, and I can say without reflection on his fellow faculty members that I remember even now more particular things he taught us than those of all the rest of the faculty combined.

To those who did not have the privilege of knowing Dr. Chaillé I should suggest that they may in some sense get some idea of his dignified erect carriage, clear, accurate use of English, facility for impressive and accurate teaching, the admiring devotion of his students, loyalty of and to his friends, his progressive, enlightening contributions to the medical literature covering a vast field of medicine, and showing thorough, exhaustive preparation, his activities in the interest of medical education and organized medicine, and the general esteem in which he was held by the medical profession and laity, if they will take a glance over there at my good friend, his worthy grandson, Dr. S. Chaillé Jamison.

AUTOGENOUS VACCINE THERAPY IN PEDIATRICS*

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Vaccine-therapy, especially in the English speaking countries of the world, is becoming more popular and claims many converts to its cause. The last word in the treatment of all clinical entities where bacterial invasion is specifically known, or at times accidentally suspicioned, has many followers whose deductions are enthusiastically and convincingly in the affirmative. There are still others, equally as well trained, who seemingly, after months of experimentation and clinical study, are not of

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the belief that vaccines have proved their worth, either prophylactically or curatively. Numbered in the latter group are those who emphatically state that in instances where satisfying conclusions are obtained—specificity, sensitization and type of vaccine, concentration and number of injections, have played but a small and insignificant role. Might not non-specific proteins have had the same effect?

From the innocent coryza, to the virulent septicemia are entities where vaccine therapy is resorted to in the hopes of their being a panacea when all other plans of treatment have failed.

Disease in all of its phases includes so many different types of bacteria, which necessarily precludes a discussion of all the various vaccines that are being utilized at this time.

This presentation covers autogenous vaccine therapy pertaining to: (1) cold (coryza) with and without sinusitis; (2) asthma; (3) pyelitis; (4) furunculosis;—one hundred and twenty-five cases in children treated with autogenous vaccines. Evaluation as to the relative virtues of the autogenous versus the stock vaccine, or the simple contrasted with the sensitized preparations will not be attempted. Statements of facts alone are given; opinions and deductions are quoted; and my own resumé after ten years of use is presented to you for your criticism and comment. If satisfying conclusions are obtained through this treatment, why discuss at length the many hypotheses, *viz.* whether the patients themselves elaborate their own opsonic power of the antibodies, or by "adding their action (vaccines) to that of the antibodies already formed in the organism." Finally, who is willing to prophesy that our present acceptation of immunity might not ultimately evolve to the belief, above everything else, of the cuti-immunity theory? While I am passively concerned in how immunity is effected, it is of secondary importance. The clinician is actively interested in knowing—are vaccines worth the while?

Table 1. Classification of 125 cases in which autogenous vaccines were used.

1. Common cold		46
a. with sinusitis	14	
b. without sinusitis	32	
2. Asthma		35
3. Pyelitis		33
4. Furunculosis		11

THE COMMON COLD

The world over is the habitat of the common cold, whose incidence is responsible economically for the greatest loss of working hours. Sufficiently important, were it local and self-limited; decidedly more serious are associated complications, resulting in permanent aftermaths or else in death. An insidious pathology lowers the vital resistance to general infections and paves the way for added organic disease. Colds are both contagious and infectious and all of our efforts in the past to limit the same have been of no avail. It is problematical whether or not we shall be able to protect the human race as a whole through immunization. Were the bacterial flora in the nares and throat the same the entire twelve months of each year, then, perhaps, our problem would not be quite so burdensome. But, as there is a change in type and in virulence during each season, to reach a happy millennium would necessitate an autogenous vaccine being made from cultures obtained at least four times yearly. This fact alone explains why the protection anticipated is not immediate and corroborates the statements of others that ultimate beneficial results can only be noted after many months will have elapsed.

Table 2. Improvement with vaccines in common cold with and without sinusitis.

	With Sinusitis		
	No.	Fair	Excellent
Cases	8	2	4
Per cent	57.1	14.3	28.6
	Without Sinusitis		
	No.	Fair	Excellent
Cases	20	3	9
Per cent	62.5	9.4	28.1
	Total Average		
	No.	Fair	Excellent
Cases	28	5	13
Per cent	59.8	11.8	28.4

Table 3. Number of cases given vaccines in common cold with tonsils removed and remaining.

	With Sinusitis	Without Sinusitis
Removed	11 cases	19 cases
Remaining	3 cases	13 cases

Table 4. Cases by quinquenniad.

1925-1930	1930-1935
25 cases	21 cases

Table 5. Age periods of patients given cold vaccine.

Under 2 years	9 cases
2-6 years	24 cases
6-11 years	13 cases

Table 6. Period of year in which cold vaccine was administered.

Early Spring	20 cases	43.5 per cent
Winter	20 cases	43.5 per cent
Autumn (late)	6 cases	13.0 per cent

The carrier rate of pathogenic bacteria of upper respiratory infection noted in autumn is relatively low, resulting in mild types of the common cold. Winter months associate added bacterial host of increased virulence and offer an explanation why outbreaks of infections of the upper respiratory tract assume a more serious aspect at this time. When colds acquire elevation of temperature and constitutional manifestations, a subdivision of this broad clinical entity becomes necessary and the designation of its particular involvement is usually expressed by the name given to that part of the body which is affected more than any other at this time—pharyngitis, laryngitis and bronchitis. If there is a filterable virus of the common cold in the adult, there must of necessity be one in the case of children. By some it is held responsible for the common cold and acts "as an initiating agent which permits these bacteria (pathogenic organisms) to produce more severe infections" Kruse (1914); Foster (1916); Dochez, (1930); Long (1931). Brown (1932) demonstrated the impossibility of immunization with vaccines obtained from the bacteria of upper respiratory tract that would prevent the common cold.

Kolmer (1925) says "It may be stated in general that autogenous vaccines, i. e., those prepared from the patient's own bacteria, should be used whenever possible, especially in the vaccine treatment of disease. To be successful, vaccine therapy demands that the bacteria be as little changed as possible. Before they are killed the bacteria should be endowed with as many of the potencies as possible with which they maintain themselves in the body. As these potencies do not remain unchanged during artificial life, as the loss of capsules, and loss of virulence, it is advisable to secure the organism causing the infection as quickly as possible and prepare a vaccine without undue delay . . . . Variants may occur among cultures of the same species, ... In the use of an autogenous vaccine this risk of using an alien species or a different strain is reduced to a minimum . . . . autogenous vaccines are to be preferred for the treatment of disease providing they are properly prepared. . . . . "

Kolmer (1932) concludes, "There must be something of real merit in vaccine prophylaxis and treatment of disease for this therapy to have survived all the abuses committed in its name during the past 25 years."

In discussing the value of vaccination against the "common cold" he states, "For my own part autogenous vaccines or mixed autogenous and stock vaccines have proved of value in the prevention of colds in 50 to 60 per cent of cases without polyps, hypertrophied turbinates, or adenoids, although the duration of immunity following the injection of four or five doses at intervals of three to five days has usually lasted only six to eight months but generally considered well worth while by the victims of frequent recurring attacks of this infection . . . . "

Carter (1932), in the treatment of a cold that is well developed, found that an autogenous vaccine, prepared from the secretions from the nose, mouth and throat, the more satisfactory. His experience in the use of cold vaccines extended over a period of four years. Heiman (1933) believes "the so-called catarrhal vaccines are more vaccines than catarrhal . . . . a vaccine made from the common secondary invaders can aim only to ward off the accessory symptoms and not the cold itself . . . . " Hoyle (1933) treated by autogenous vaccine therapy 67 individuals suffering from very frequent and severe attacks of coryza. The results showed that the vaccine exerted no influence on the incidence of attacks. He found, however, that they tend to diminish the frequency of severe complications such as pneumonia, though supported by only a small number of cases treated in this way. Lengman (1933) states " . . . . Vaccines, either the polyvalent stock vaccines or better, the newer type of selective vaccines,

undoubtedly are a help in preventing head colds in a great many individuals . . . . " Cox (1933) and (1934) received favorable results in a few cases treated with autogenous vaccine.

Brenneman (1934) has had no experience with "cold" shots. Abt (1934) also believes the use of vaccines of doubtful value. Kennedy (1934), in writing on respiratory diseases in children, remarks that ". . . . cold vaccine seems to be a satisfactory prophylactic in about 40 per cent of cases . . . . " Briscoe (1934) is of the opinion that vaccine treatment is of value in diminishing after-effects and reducing the period of disability. He suggests that an injection should be given every three or four weeks from the middle of September to April, commencing with a small dose and increasing by 50 per cent until the full dose is reached. Young (1934) believes that vaccines, autogenous and stock, have seemed helpful in lessening the severity of attacks in susceptible persons, and preventing the more serious complications, such as acute nasal sinus infections, especially in elderly mild bronchitics and notably in preventing their more serious attacks. Bethea (1935) states:" . . . . An attack of coryza does not produce any lasting immunity and we could not logically expect a vaccine to do much more than an attack of the disease. On the other hand, it might be argued that the disease reduces the vitality of the tissues most concerned and often leaves foci of infection from which subsequent attacks may develop and that these unfavorable effects are not associated with the use of a vaccine, either autogenous or stock."

There is a close interrelationship between colds, sinusitis and bacterial bronchial asthma, thus making it seemingly difficult at times to discuss the one without the others.

COMMON COLD WITH SINUSITIS

Unfortunately, the initial head cold or coryza may go unnoticed. Frequent attacks or exacerbations of longer duration follow in quick sequence. Symptoms then assume a disagreeable nature. Some method of relief is sought and the avenue of approach is the sinuses. Sinusitis (maxillary), from my own deductions, is usually involved secondarily. The subsequent colds are associated with pus in the nares, a profuse sero-purulent tenacious discharge and commonly claim a night cough for positive identification. Kerley (1934) shares the same opinion. He records 781 cases where tendency to colds was obviated by a simple method of treatment of the sinuses.

Cox (1933) records the successful treatment of 15 cases of chronic sinusitis, nasal allergy and bronchial asthma, with autogenous vaccines. He later (1934) reports "so improved as to be classed as cured" 15 of 19 patients treated with autogenous vaccines for chronic sinus infections and nasal allergy. He mentions a marked seasonal variation. Ashley (1934), in discussing treatment, states in part, ". . . vaccines, both autogenous and stock, frequently give good results . . ." Parsky (1934) believes that the use of vaccines in acute sinus infection is of secondary importance, that the greatest benefit is obtained only in the subacute of chronic case, where autogenous and stock preparations give equally splendid results. In the use of autogenous vaccine, he recommends the procedure of Meyer Solis-Cohen in the preparation of what he terms a pathogen-select vaccine.

GENERAL ROUTINE OF TREATMENT

1. Phenolized vaccines * alone have been employed in the treatment of these 125 cases.

2. The initial dose of the cold vaccine is 1/8 to 1/4 of a c.c., increasing 1/8 to 1/4 c.c. for succeeding doses up to 1 c.c., and maintaining this maximum amount until the treatment will have been concluded.

3. If the case is a serious one, two or three injections will be given the first week; one to

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***All of these vaccines, except two, have been prepared by Drs. W. H. Harris and A. V. Friedrichs, New Orleans, La., as follows:**

"The cultures are grown on nutrient agar or on special media where indicated. When growth obtained is sparse, it is spread over the media in order to obtain a luxuriant growth.

"The growth is then washed down with normal saline, with approximately 5 c.c to form the original suspension. This is then phenolized while in concentrated form and allowed to stand for several hours. A viability test on homologous media is made and if found to indicate death of the micro organisms, the thick suspension is further diluted up to suspensions containing approximately four billion bacteria per c.c.

"From the primary growth the bacteria are studied and identified."

two injections the second week, and one injection weekly thereafter for a period commensurate with the particular case, usually requiring several months. As colds and sinusitis are generally encountered in the colder months of the year, 87 per cent of these cases have received their initial injection in the winter or spring months; 13 per cent in autumn and none during the summer months.

4. A similar routine in the treatment of bronchial asthma is followed, except that the weekly injections are given for at least one month after the acute symptoms have subsided. In this group, as compared with the others included in this paper, the asthmatic child must be treated individually.

5. In pyelitis the same dosage is given and two injections weekly for one month are administered. Thereafter, one injection each week until the urine will have been negative for four successive weeks.

6. In furunculosis two injections weekly are indicated. This therapy is continued until all of the lesions will have cleared.

BRONCHIAL ASTHMA

Thirty-five selected cases of bronchial asthma were treated, the same extending over a period of many months. Deductions were most satisfying. Food tests were negative in practically all the cases and where positive were limited in intensity of reaction and number of foods. Tonsils and adenoids had been removed in every case prior to treatment and the other tests included in Chart No. 5 were resorted to where the economic status of the patient warranted it. Continued observations lead me to infer that sinusitis invariably goes hand in hand with bronchial asthma. As would be expected, clear-cut cases due to one etiologic factor alone is the exception and not the rule and every attempt should be made to determine other contributing causes. Where culture growths are sparse and contain none other than the usual flora found in the nares and throat and where there is reason to believe through trans-illumination and radiological findings that one or all of the sinuses are involved, a Douglas puncture is indicated and additional cultures should be resorted to from either the washings or the sinus from the material obtained through suction or by direct culture. Seldom does one encounter any other than the antrae as being basically the primary cause of bronchial asthma of bacterial origin.

Table 7. Results obtained with vaccines in bronchial asthma. Good or excellent in 65.7 per cent. Food tests in 28 cases.

	No.	Good	Excellent
Cases	12	14	9
Per cent	34.3	40.0	25.7

Table 8. Status of tonsils of patients given asthma vaccine.

Removed	35 cases
Remaining	0 cases

Table 9. Laboratory Asthma Routine.

Determine and eliminate:

1. **All skin tests.**
2. **Calcium and phosphorus of blood.**
3. **Hay fever.**
4. **Sinus disease (roentgen ray)**
5. **Blood test (focus infection)**
6. **Metabolism**
7. **Bronchiectasis (roentgen ray)**
8. **Transillumination**
9. **Nasal smear**
10. **Urine—indicanuria.**

Wilmer and Cobe (1933), in a statistical study covering a period of six years, offer some very interesting information and a pessimistic summary. While they hold no brief for vaccine usage and place no faith in its specificity, still they suggest no substitute to take its place. At best, they conclude that autogenous vaccines are obviously more scientific. Three different groups of cases were followed where autogenous vaccines were employed: (1) "P" Group, where pathogens alone were used; (2) Group "G", including all organisms cultured from the focus whether or not they be normal inhabitants at the site of culture, and (3) Group "C", the so-called selectivity group—the organisms used were based on skin reactions and have been designated "pathogenic selectivity." The bacterin included only such bacteria as gave a definite reaction of 2 plus or more and where the reaction persisted for a period of from 24 to 48 hours, containing both pathogens and normal flora. Indeed, I subscribe to their opinion "that each case of bronchial asthma of bacterial origin should be considered as an individual bacteriologic problem, particularly from the standpoint of treatment, and therapy should be

adjusted to fit the individual case." In variance with their belief that non-specific protein reactions are responsible for the small per cent of positive results, it appears to me that autogenous vaccines have specific responses.

Voorsanger and Firestone, in a series of 66 cases, report 22.7 per cent cured, 40.9 per cent improved and no relief in 36.4 per cent, all having received autogenous vaccine. Their results parallel those found by others, including Rackemann (1923), and tends to discount the efficacy of autogenous vaccines. Auld (1931) suggests that protein shock is the basis for a successful vaccine usage. Cooke (1934) found it difficult to evaluate the effect of vaccine therapy and used only those vaccines which produce a symptomatic asthma. Banks and Beasley (1934) classify the etiology of their cases into intrinsic and extrinsic asthma. "The introduction of the terms extrinsic and intrinsic into the study of bronchial asthma requires further explanation. It seems reasonable to assume that the two groups, seasonal and non-seasonal asthma, possess the same intrinsic cause. The difference, however, lies in the fact that the non-seasonal group does not require some external factor." They quote Weille (1933), whose article entitled "The Surgical Treatment of Chronic Sinusitis in Asthma" led him to deduce that 80 per cent of asthmatic patients exhibit some degree of sinus trouble, though no children under 12 years of age were included in his observations. They offer, as an explanation for the above, that "as age increases, changes must occur in the upper respiratory tract that are conducive to the development of asthma," and like many others believe that asthma of bacterial origin is primarily due to infection of the upper respiratory tract.

Banks and Beasley (1934) combine surgical corrections of any pathological changes produced in either nose or throat and the immunization of the patient against organisms producing the infection when treating cases of bronchial asthma. They too prefer selective autogenous vaccine and feel that it is capable of producing a direct effect upon the cause of asthma. Their method of administration is in contrast to that which is employed by others quoted in this article. Their vaccine is diluted to such a strength that the initial dose produces no reaction locally or systemically whatsoever. Small increase in dosage given daily has produced quicker desensitization in their hands and evidences conclusions that aim to establish each patient's tolerance for his vaccine. Smaller doses and frequent intervals are the key note of their successes. Of 143 cases, 80 per cent have shown remarkable benefits.

Young (1934) summarizes his observations —"Asthmatic patients are often extremely sensitive to vaccines, it is, therefore, best to proceed on the principle of desensitization rather than that of immunization. Whitby recommends starting with minute doses, a tenth of a million or less, with gradual increases at three day intervals until the maximum dose, which does not cause a reaction, is reached. After this a long series of doses of this strength may be given at longer intervals of a week or more. Reactions should be avoided hence they may induce a severe attack of asthma, or even a condition of 'status asthmaticus' of distressing and even alarming character."

Fleming (1934) concludes "In the early days of vaccine therapy, research was largely directed to the extension of the method to different infections, and innumerable papers appeared showing that almost all bacterial diseases could be prevented or have their course modified by the use of vaccines. In recent years more attention has been paid to the quality of the vaccine and especially to the state of the microbial strain or strains from which the vaccine is made. Intensive researches have been carried out on the different antigens which are present in bacteria and extremely interesting and valuable results have emerged."

PYELITIS

Exceptional results have been obtained in 45.5 per cent of the 33 cases of resistant pyelitis by the use of autogenous vaccines where treatments other than cystoscopy have been used with negative results. Seemingly it is more effective when more than one organism has been recovered. Fox (1933) combines

Table 10. Results of vaccines in pyelitis.

	No.	Fair	Excellent
Cases	7	11	15
Per cent	21.2	33.3	45.5

autogenous vaccine with pelvic lavage in cases of chronic pyelitis.

FURUNCULOSIS

Kolmer (1932) believes that we frequently overlook "a golden therapeutic opportunity by omitting vaccine therapy in some acute infections, especially otitis media and furunculosis, which may become chronic and thereby reduce the chances of successful therapeutic immunization." Fautus, (1934) in discussing the therapy of furunculosis with regards to general treatment states: "Impairment of nutrition should be corrected. In all cases of furunculosis the patient should be examined for diabetes, nephritis or anemia and appropriate treatment instituted if any one of these conditions is found. Obesity may require attention. Vitamin deficiency, if present, might be corrected by cod liver oil, general ultra-violet irradiation or sun baths and possibly by brewer's yeast.

Table 11. Result with vaccines in furunculosis.

Period	1926-1934
Cases	11
Result	Excellent—100 per cent

"Resistance should be improved by: (a) removal of foci of infection, which may keep general resistance low; (b) vaccine therapy with autogenous vaccine, starting several days after disappearance of acute lesions on account of the possibility of the negative phase aggravating the condition. The dose arrived at should be such as to cause a definite but mild local reaction. If the reaction has been excessive, the dose is repeated; otherwise it is gradually increased until the patient tolerates without reaction possibly ten times the dose that at first produced a reaction. The interval between doses should be such as to permit complete disappearance of all phenomena of reaction, possibly three, five or seven days . . ."

My personal follow-up, 11 cases where incisions of the larger furuncles were effected and autogenous vaccines alone given, yielded 100 per cent cures.

SUMMARY

1. The use of autogenous vaccine in 125 pediatric cases is reported.

2. This series is limited to the treatment of colds—with and without sinusitis, asthma (bacterial), pyelitis and furunculosis.

3. All children included were followed in private practice.

4. Evaluation of this as compared with other methods of treatment was not attempted.

5. The relative merits of stock vaccines were omitted in their entirety.

CONCLUSIONS

1. Cold vaccines gave results in only 28.4 per cent of the cases.

Immediate protection is the exception to the rule.

Small initial with increasing doses, not exceeding 1 cc. at frequent intervals and over a long period of time, is advocated.

The seasonal change of flora of the upper respiratory tract justifies additional observations as to what organisms shall be included and the further consideration of a perennial vaccine.

At this time, autogenous cold vaccines have proved ineffective and should merit but a passive consideration in the treatment of colds.

2. In selected cases, vaccines in bronchial asthma gave 25.7 per cent cures and noticeable improvement in 40 per cent, in all 65.7 per cent compared to 34.3 per cent failures.

The bacterial focus or foci of infection must be sought; the method of culturing should, in every case, follow a definite routine.

Deductions warrant continued use of vaccines in the treatment of bronchial asthma of bacterial origin.

Selective vaccines, based on skin reactions, reported by others, give better results.

3. Vaccine therapy, in cases of resistant pyelitis where other treatments except cystoscopy have been used with negative results, is reported.

Forty-five and one half per cent of these cases have been cured and vaccines appear especially effective when more than one organism has been removed.

The treatment of pyelitis by vaccine should be encouraged and continued.

4. In furunculosis 11 cases have yielded 100 per cent cures.

REFERENCES

Abt, Isaac: Illinois Med. 66:366, 1934. (Discussion Brenneman's paper).

Ashley, Rea: Sinus disease in children, Cal. & West. Med., 40:156, 1934.

Auld, A. G.: Non-specific treatment of asthma, Lancet, 1:804, 1931.

Banks, H. M. and Beasley, T. J.: Selective autogenous vaccine in the treatment of bronchial asthma, Ind. State Med. Assn., 27:151, 1934.

Bethea, O. W.: Vaccines in clinical medicine, Internat. Med. Digest, 26:48, 1935.

Brenneman, J.: The common cold in infancy and childhood, Illinois Med., 66:366, 1934.

Briscoe, C.: Prevention of respiratory infections, Lancet, 1:645, 1934.

Brown, W. E.: Vaccine in prevention of common cold. Experiment, Am. Hygiene, 15:36, 1932.

Carter, W. W.: Common colds: their treatment with vaccines, Med. Times & Long Island Med., 60:153, 1932.

Cooke, R. A.: Asthma in children—its causes and treatment, J. A. M. A., 102:664, 1934.

Cox, W. C.: Autogenous vaccines in the treatment of chronic sinus infections and nasal allergy, Military Surgeon, 73:121, 1933.

Cox, W. C.: Further studies, Military Surgeon, 75:-317, 1934.

Dochez, A. R., et al: Studies in common cold; experimental transmission of common cold to anthropoid apes and human beings by means of filtrable agent, Exper. Med., 52:701, 1930.

Fautus, B.: The therapy of the Cook County Hosp.; furunculosis, J. A. M. A., 103:411, 1934.

Fleming, A.: Recent advances in vaccine therapy, Practitioner, 133:537, 1934.

Foster, G. B. Jr.: The etiology of common colds, J. A. M. A., 66:1180, 1916.

Fox, P. G.: Pyelitis, South. Med. & Surg., 95:535, 1933.

Heiman, H.: Respiratory infections in children, Arch. Ped., 50:53, 1933.

Hoyle, L.: Treatment of acute coryza by autogenous vaccine, Brit. Med. J., 1:996, 1933.

Kennedy, H., Jr.: Respiratory diseases in children, Med. Assn. Ala., 3:274, 1934.

Kerley, C. G.: Relation of frequent colds in children to diseases of the accessory sinuses, Med. Soc. New York, 30:209, 1933.

Kerley, C. G.: The repeated "cold," Arch. Pediat., 51:254, 1934.

Kneeland, Y.: The protection afforded by vaccination against secondary invaders during colds in infancy, Exper. Med., 60:655, 1934.

Kolmer, J. A.: Infection, Immunity, and Biologic Therapy, 1925, p. 755.

Kolmer, J. A.: Present status of vaccine and non-specific protein therapy, Pa. Med., 36:9, 1932.

Kruse, W.: Die Erreger von Husten und Schmpfen, Munchen. med. Wchnschr., 61:1547, 1914.

Lengman, E. L.: Symposium—common cold, Ind. Med. Assn., 26:52, 1933.

Long, P. H., et al: Etiology of acute upper respiratory infection (common cold), Exper. Med., 53:447, 1931.

Persky, A. H.: Sinusitis in children, Arch, Ped., 51:587, 1934.

Rackemann, F. M. and Graham, L. B.: Vaccine treatment of asthma, Immunol., 8:295, 1923.

Voorsanger, M., and Firestone, F.: Vaccine therapy in infectious bronchitis and asthma, Cal. & West. Med., 31:336, 1929.

Weille, F. L.: Studies in asthma; surgical treatment of chronic sinusitis in asthma, J. A. M. A., 100:241, 1933.

Whitby, L. E. H.: Personal communication to R. A. Young, Pract., 133:356, 1934.

Wilmer, H. B., and Cobe, H. M.: Vaccine therapy: the uses and misuses, Allergy, 4:414, 1932-33.

Young, R. A.: Advances in treatment of diseases of the respiratory system, Pract., 133:356, 1934.

DISCUSSION

Dr. Wm. H. Harris (New Orleans): I am very pleased to have had the opportunity of hearing Dr. Bloom's presentation. Of course, in considering the subject of vaccines, and vaccine therapy, we date back to a very old problem. I recall that I wrote a thesis under our late estimable Dean, Dr. Chaille, twenty-eight years ago, entitled opsonins, opsonic index and vaccine therapy. I have always maintained a deep interest in this topic. We will find in the audience here a considerable number of protagonists as well as a great number of antagonists as regards the use of vaccines. There is no gain-saying the fact that use of vaccines is correct in principle and is fundamentally sound. A case of infectious disease gets well because of the fact that the patient forms antisubstances allied and often identical with those produced by vaccines. At times, however, it is probable that the invaded host contributes to the specific antigen. The question of specific antibody production by bacterial vaccines or other antigens is definitely recognized. I think the most tangible evidence we have of such reactions is clearly shown in hemolysins. If we take three rabbits, inject one rabbit with sheep red blood cells, another rabbit with human red cells, the third with red cells of another animal, the blood sera subsequently obtained from these animals reveals a specific dissolution or breaking down of the particular cells put into each distinct animal. It is clear cut and definitely specific. The same specificity of such antibodes can be produced with bacteria.

From the practical standpoint, we know that vaccines are not the panacea that it was originally hoped they would be. Just as when the bacteriophage came out we thought we had something to clear up every infectious disease, but it has proved of much less value than vaccines. I do believe, however, that sometimes false conclusions are arrived at by the employment of vacvines in certain diseases as well as in a small series of cases insufficiently large to form a proper basis.

I would like to emphasize one particular point in conjunction with the matter of the employment of vaccine and that is, I do not believe it is advisable at any time to do away with clinical treatments and procedures that may aid against the disease process at hand. If we wish to cure a patient, it is primarily sound to use all means we have in our power, and in many instances I do not believe we should use any single form of treatment or procedure. I have especially in mind one phase Dr. Bloom mentioned, the matter of sinusitis with recurrent "colds." It is absolutely fallacious to attempt to use any vaccine without the introduction of some allied clinical therapy. From the

common cold standpoint, we must consider the work of Dochez. It appears from his experiments that a filterable virus plays an important role in the causation. Our vaccines do not contain this virus but on the other hand, the secondary invaders, if they are such, would be of some service. In conclusion, I feel sure that if others who are opposed to vaccines would do as Dr. Bloom has done and give vaccines a fair trial in varied conditions, they would find as he has, that autogenous vaccines occupy an important position in our therapeutic armamentarium.

Dr. Charles Bloom (In conclusion): I had hoped that there would be more or less antagonistic response to this paper. As you will have concluded, I am rather sympathetic to the administration of autogenous vaccines in furunculosis, bacterial asthma and resistant pyelitis but as yet not as enthusiastic about its administration in the so-called common cold. Unfortunately, time does not permit my going into detail relative to the virus which Dr. W. H. Harris has discussed for we know in reality this is essentially responsible for the common cold and that secondary invaders continue this process which ultimately involves the sinuses. I heartily concur with Dr. Kerley, of New York City, who reported 781 cases of chronic colds which were definitely traced to the sinuses.

THE USE OF ABDUCTION SPLINTS IN FRACTURES OF THE HUMERUS*

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In the course of years of practice every physician comes to have certain methods of treatment to which he finds himself giving preference. This fact of human nature gives meetings such as this a two-fold value. In rubbing minds with one another we are shaken out of too exclusive reliance on our favorite ways of doing things, and, again, we are afforded the opportunity of passing on to our colleagues observations on methods which we have been following with success and in which a critical appreciation of their benefits, rather than habit and routine, has led us to put faith, and to receive from them, in turn, similar observations.

I am giving you a plan with which you are no doubt already familiar, the treatment of fractures of the humerus with the abduction splint. In the last three years I have treated thirty-six cases in this manner. I therefore feel that I can speak with a certain confidence, which will, perhaps, inspire confidence in those of you whose experience with this type of splint has been more limited.

A fractured bone is perhaps the commonest emergency with which the general practitioner has to deal. The coming of the automobile, with the great increase in road accidents, is making fractures of more and more importance to physicians thoughout the country. The fracture case is necessarily, in nearly all instances, brought to the hospital as speedily as possible. Roentgen ray examination is essential in the management of a reduction. It is by no means always necessary that the patient be hospitalized for further treatment, and we should realize that when hospitalization can be avoided we nearly always earn the deep gratitude of our patient.

To the physician, the conveniences at hand in the hospital, the trained attendants capable of foreseeing his wants and relieving him of the responsibility for many details, and the fact that in the hospital his language is spoken and understood, make hospital treatment seem the ideal method not only for grave illnesses but also for many cases of prolonged disability where repeated checking of the condition is required. Recent years, however, have brought the physician sharply up against the fact that, if the tide of protest against the high cost of medical care is not to keep on rising, hospitalization must be curtailed as much as possible and omitted altogether whenever this can be done without real disadvantage to the patient. The physician must bear some of the blame for this high cost, because too often he has not carefully weighed the pocketbook of his patient against the more or less theoretical advantages of hospitalization in some cases that could, with perhaps a little more effort and planning on his part, have been cared for at home with equally good final results.

There are numerous appliances on the market for splinting the fractured humerus in abduction; the one which I am using at present is the Scott humerus splint. I have found this splint efficient and time-saving and desirable from the point of view of which I have just

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been speaking, since it does not require hospitalization. I have found the abduction splint satisfactory in almost all types of fracture of the humerus. In my series of thirty-six cases there was only one compound fracture. This was of the lower portion of the humerus with dislocation of the ulna. This case and one other are the only ones that have not been completely satisfactory in end results.

It has been my experience that an anesthetic is not always necessary for reduction of fracture of the humerus, as this can sometimes be accomplished by extension and counter extension with the arm and forearm pieces of the splint. If possible, roentgen ray examination should be made before and after reduction. It is important that the patient should be contacted every few days to determine whether or not complications are developing.

I will cite a few cases to illustrate the results obtained in various types of fracture of the humerus.

CASE REPORTS

Case 1. Mrs. S. W., aged 56 years, fell while walking and injured the right shoulder. A roentgenogram showed an impacted fracture of the anatomical neck of the humerus. The fracture was reduced without anesthesia by the aid of the humerus splint. A second roentgen ray examination was made and showed satisfactory reduction. The patient left the hospital shortly after the reduction and reported to the office weekly for six weeks. The splint was then removed. Ultimate function was as good as before fracture.

Case 2. Annie K., aged 12 years, fell while riding horseback and injured the left arm near the elbow. Roentgen ray examination revealed a diacondylar fracture of the humerus. This was reduced under gas anesthesia and an abduction splint was applied. The second roentgenogram showed satisfactory reduction. The patient left the hospital after the reduction with instructions to report to the office on the second day. The splint was removed at the end of about seven weeks and gentle active and passive motion of the elbow was prescribed. Ultimate results were excellent and function was as good as before fracture.

Case 3. Betty Jane D., aged 6 years, fell from a swing in the school play-ground and injured the left arm near the elbow. Roentgen ray examination showed a diacondylar fracture of the humerus. The fracture was reduced under gas anesthesia and the arm was then placed on an abduction splint. The second roentgenogram showed satisfactory reduction of the fracture and the patient was sent home with instructions to the parents to bring the patient to the office for examination the following, or second day. These instructions were not followed and the patient was not seen until a week or ten days later, when it was found that pressure necrosis of the skin had developed over the flexor muscles of the forearm. While this complication did not interfere with the healing of the fracture, it caused some worry and suffering that could have been avoided if the patient had been seen on the first or second day after the reduction. The splint was removed after the sixth week, but the ulcerated area on the forearm persisted for a further two weeks. The end results were good, but the ultimate function was not as good as it would have been if we had seen the patient oftener during the first week of treatment.

Case 4. Mrs. A., aged 53 years, was riding on the rear seat of an automobile when the car was wrecked. She was thrown against the back of the front seat, sustaining injury to the left shoulder. Roentgen ray examination showed a complete fracture of the left humerus at the surgical neck. She was given gas anesthesia and the fracture was reduced. The arm was then put in an abduction splint. On the second roentgenogram the fracture was seen not to be completely reduced. Gradual traction was then made by sliding the arm pieces of the splint until reduction was complete. The splint was removed after eight weeks and the patient was discharged with the arm in satisfactory condition. Ultimate function was good.

Case 5. D. L., aged 45 years, was riding in his automobile when his car was struck by a passing truck. His left arm was injured by being caught between the truck and the automobile. Roentgen ray examination showed fracture of the humerus close to the junction of the lower and middle thirds. The fracture was reduced under gas anesthesia and an abduction splint was applied. A second roentgenogram showed satisfactory reduction. The patient was seen three times during the first week; after that, twice weekly. The splint was removed after the seventh week. Ultimate function was as good as before fracture.

Fracture through the anatomical neck of the humerus, of which my first case is an example, is rare. Cubbins and Scuderi[1] saw only one such in five hundred fractures of the humerus. My case was typical as occurring in an elderly person and in being impacted. Fracture of the surgical neck accounts for about one third of all fractures of the humerus. In a considerable proportion of cases it is complicated by dislocation of the head. This complication may go unrecognized. The possibili-

ty should be borne in mind, since, if reduction of the dislocation is delayed till the bone has healed, the head will be so firmly fixed by adhesions and scar tissue that the force necessary for the reduction may be so great as to produce injury to the blood vessels and nerves about the axilla.

Diacondylar fracture is frequent in children. I have given two examples, both caused by falls. The usual cause is a fall on the outstretched arm, the force being transmitted upward to the humerus. In these fractures prompt and complete reduction is particularly important. Swelling occurs rapidly after the injury. This makes recognition of the bony landmarks by palpation difficult, and enhances the importance of early roentgen ray examination, for reduction should not be delayed through waiting for the swelling to go down. In the first place, the best treatment for the swelling is reduction, and in the second place, should one wait a few days for swelling to subside, adequate reduction may have become impossible by reason of callus, since callus formation is particularly rapid about the elbow and also tends to be excessive at this site. The result would be limited motion in the joint.

Nerve injury is a frequent complication of fracture of the bone in the vicinity of the elbow and is not unusual in fracture of the shaft. It is advisable to examine for evidence of palsy before making the reduction to avoid the possibility of a suggestion in the future that the nerve injury occurred during the manipulation of the fragments.

Non-union is of relatively frequent occurrence following fracture of the shaft of the humerus, and inadequate fixation is one of the causes. Meyerding[2] has pointed out that the commonly used compression splints and sling allow too much movement of the fragments and the weight of the arm, unless constantly supported, tends to produce faulty alignment and to favor edema. The abduction splint prevents edema and permits movement of the elbow and hand. The apparatus applied should not extend from the wrist to or just beyond the site of fracture, as it is often made to do, since this allows the slightest movement of the forearm to be transmitted to the fracture.

Before closing I would like to say a word on the duty of the physician, in these days of road accidents, to instruct the public on the importance of letting an injured man alone, so far as possible, until the doctor can be brought to him. Much added damage is inflicted by the lifting and trasporting by ignorant persons of a man with an unsplinted fractured long bone. It seems to be human nature to want to get an injured man on to his feet. "Let him lie" is good advice, unless the nearest physician is at too great a distance.

REFERENCES

1. Cubbins, William R., and Scuderi, Carlo S.: Fractures of the humerus, J. A. M. A., 100: 1576, 1933.
2. Meyerding, Henry W.: Fractures of the humerus, Minn. Med., 14: 963, 1931.

DISCUSSION

Dr. H. L. Gardiner (Crowley): I first wish to congratulate Dr. Faulk on his splendid paper. I likewise want to compliment him on the results he obtained in these cases. It has been my privilege to handle some of these cases with Dr. Faulk, and the results have been gratifying.

The abduction splint, because of its simplicity and comfort, has a certain appeal. Like Dr. Faulk, I have used it in all of my fractures of the humerus, whether of the upper end, the shaft, or the lower end, with some modifications.

One of the advantages Dr. Faulk mentioned with this type splint is that it permits the patient to be ambulatory. After a few days he is allowed to go home. It is one that gives complete mobilization, whether in bed or up and walking around.

Another point Dr. Faulk mentioned was the necessity for taking a roentgenogram. I never attempt a diagnosis without the roentgenogram, taken before the splint is applied and taken after the application of the splint. In fractures of the surgical neck, the arm is put up in abduction with the forearm flexed, being careful thoroughly to pad the elbow, and in addition I use a coaptation splint over the shoulder and arm. I feel that this gives further mobilization and prevents the malposition from occurring.

After the first week I begin massage, and after the second week, gentle passive motion is instituted, gradually increasing it, because the fracture may extend into the capsule and some ankylosis may result if passive motion is not instituted. Besides, a passive motion is easily instituted with the splint in place. In fractures of the shaft it is also used, and again the application of the splint I find of much assistance in holding the fragments in position.

Fractures of the lower end of the humerus are numerous, and there are fractures of the external and internal condyle, or you may find fractures of

no name at all. In this type of fracture I use the same splint, but with a more acute flexion of the forearm. Here early massage and manipulation are again instituted, because of the dangers of ankylosis if this is not done.

I believe the high point of Dr. Faulk's paper was the fact that these cases are ambulatory, that they are permitted to go home, to be out and around. They save hospital expense, and I find they do better at home, where they are happier and up and around, exercising. I have employed practically the same method, and my results have always been satisfactory.

Dr. Guy A. Caldwell (Shreveport): I think Dr. Faulk brings to us a question of utmost importance, and that is the question of the ambulatory treatment of fractures of the humerus. I should like to ask him at the outset: Do you as a rule employ traction on this splint?

Dr. Faulk: There is traction on the splint—there are bolts on the splint to adjust for traction.

Dr. Caldwell: I think traction is of utmost importance. We all realize the difficulty of immobilizing the humerus, because of the motion of the chest wall in breathing, and the factor of putting traction on in order to mobilize and maintain apposition, is an important factor.

I think, too, that perhaps we should consider the location of these fractures. Dr. Faulk spoke of the fractures of the anatomical neck and the surgical neck treated by this splint, and fractures of the shaft, and I believe most of us will agree that traction in abduction, whether it be accomplished in bed or whether it be accomplished on an ambulatory splint, a so-called abduction splint, is a method of choice, provided it is controlled by accurate roentgen ray examination beforehand. But I doubt whether, routinely, the fracture of the lower extremity of the humerus should be treated on an abduction splint. I quite willingly grant that in certain cases where the swelling is great the elevation of the part and, as the author mentioned, the prompt reduction, are both helpful and essential. I can personally report accomplishing those measures in a badly swollen case with the patient in bed. I think the elevation is very good, and the prompt observation in those cases for two or three days until the swelling has definitely gone down is much to be preferred.

We know that non-union in the shaft of the humerus is not uncommon. In fact, it is one of the things that we fear. Where we are using traction, and in this instance traction against muscles that are not particularly strong, nothing to be compared with the muscles of the thigh and leg, it is possible to distract these fragments, and it has been my observation that the distraction of the fragments in the shaft of the humerus is one of the frequent causes of non-union.

I want to bring up another point in regard to distraction. When you have continuous traction, the forward weight should be heavy the first twenty-four or forty-eight hours, and an observation with the roentgen ray at that time may show you good apposition, and it may be continued after the muscles have been stretched. A few days later you will find the muscles well distracted, and not in apposition. Therefore, I would counsel repeated roentgen ray examinations where traction is being used, particularly on the humerus.

One point about the roentgen ray examination. I discovered this point in connection with one of my cases recently. Let us say we have a shaft of a bone coming down here, and another fragment on down here. If the tube of the roentgen ray is here, and a ray is going this way, you may think you have perfect apposition, whereas when the ray comes directly through the site of the fracture you will see it is in apposition. It is not in apposition but is distracted. Those roentgen ray examinations should be carefully and accurately made.

Dr. Isidore Cohn (New Orleans): I enjoyed hearing Dr. Faulk's talk as I remember him as a student many years ago.

In regard to the treatment of fractures of the humerus, the first point I would make is that we should not speak of treating fractures with a particular splint, but we should treat the fracture with the particular type or apparatus or method indicated. It is not the splint that we are to fit the fracture to, the splint should be adapted to the fracture, not the fracture to the splint.

Abduction in the treatment of fractures of the upper end of the humerus we have been using since about 1911 or 1912. In 1913, before the Southern Medical Association, I read the first paper that I published on this subject. The title was "Abduction and External Rotation in the Treatment of Fractures of the Humerus," which Dr. Faulk probably remembers. In that we used plaster casts, and insisted on including the shoulder and the elbow, and not bringing the arm forward, such as Dr. Gardiner spoke of, because I think bringing the arm forward and internally rotating the shaft of the humerus, are the things you do not want to do. I think it is well to keep the arm in the position of shaking hands, so it will literally be in a neutral position, rather than in internal rotation.

That is a picture taken from the article published in 1914, which appeared in the Southern Medical Journal. There you see the immobilization of the elbow. A good many of the text books still show pictures where there is no immobilization of the elbow. Unless you have a continuous traction or fixed traction of the elbow, you cannot maintain your position.

(Dr. Cohn showed a number of slides illustrating the importance of a knowledge of anatomic structures involved in the production of deformity in fractures about the surgical neck of the humerus.

Dr. Cohn also showed a number of slides indicating end results by the adoption of methods employed by him during the past twenty five years in the handling of fractures of the surgical neck of the humerus. The principles insisted upon involve anesthesia, to produce relaxation, reduction of deformity and this includes the breaking up of impaction which exists and immobilization of the arm in abduction and slight external rotation.)

I would take a different side from my good friend Dr. Gardiner, in that I believe passive motion is not indicated, but active motion to the point of not causing pain. Let the patient do what he can, without the opportunity of doing harm with pain. I think pain is harmful in all of these cases, and we are liable to fool ourselves by saying, "Oh, that doesn't hurt." The patient is not going to do anything to hurt himself.

Dr. J. W. Faulk (Crowley): I want to thank Dr. Cohn, Dr. Caldwell and Dr. Gardiner for their discussion. The splint we have been using is also a traction as well as an abduction splint.

TONSILLECTOMY BY DIATHERMY (ELECTROCOAGULATION)*

M. P. BOEBINGER, M. D.
NEW ORLEANS

Beginning with the technic of Celsus and improving through the ages, tonsillectomy has reached a high stage of evolution with electrocoagulation as the most outstanding among the modern methods employed by progressive laryngologists.

Opinions still differ widely regarding the value of this method for the enucleation of tonsils. The controversy has raged intermittently for many years and yet no decision has been reached.

Current medical literature contains much unfavorable comment which stresses the dangers of electrocoagulation. It would seem more logical to criticise unskilled operators, who by faulty technic, are likely to bring any procedure into disrepute. Poor results are recorded principally to the detriment of the method, but redound also to the discredit of the operator.

It is evidence of interest and progress that new methods are attempted, but any procedure which requires so much attention to detail, and such a thorough knowledge of the anatomy and physiology of the tonsils and surrounding structures, necessarily demands some special training on the part of the operator.

Attention to the exacting details of this procedure is so essential, that it would not seem unreasonable to anticipate, and I venture to predict, that the near future will find some few well trained surgeons in each community devoting all of their time to perfecting and advancing this method of enucleating tonsils. It is well to note that from outstanding authorities there is a universal plea for care in technic as well as in the selection of the appartus for its application.

Indeed, we might begin every discussion of electrocoagulation by denying that it is a panacea, or that it will lend successful results to the tyro in electrosurgery.

I hold very decided and favorable views concerning the value of electrocoagulation for the removal of tonsils, and after an experience of about four years, I am of the firm conviction that not only does this method merit the high consideration now being accorded it, but that the profession in the near future will, of necessity, accept it as a highly commendable adjunct to orthodox surgery.

Any method for the removal of tonsils has to be individualized. Therefore, the use of electrosurgery for this purpose is a matter of election just as with the various surgical methods. As no technic is perfect under all circumstances, the combination of surgery and electrosurgery broadens the field of service for the operator and offers greater hope of approaching the ideal.

Surgery will remain the method of choice for children and in certain types of adults, but in properly selected cases there are conditions under which the tonsils are better suited to electrocoagulation. It should be considered in all cases where there is any objection or contra-indication to surgery or general anesthesia, and when hospitalization

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and the loss of time are important factors to the patient. The increasing number of such cases opens an excellent field for the skilled electro-laryngologist who, by careful technic, may obtain nearly perfect results with a minimum of trauma or discomfort to the patient. It is also useful in removing remaining tonsillar tabs, scar or lymphoid tissue.

Electrocoagulation was devised for the safety and comfort of the patient, therefore, the multistage method should always be practiced. Attempting to remove the tonsil in one, two, three or even four treatments defeats the purpose for which we employ the method and may result in extensive sloughing and alarming hemorrhage.

When conservatively used, electrocoagulation destroys human cells and tissue; it also destroys the blood supply and seals the lymphatics, thus minimizing the possibility of hemorrhage and at the same time preventing absorption of toxic material. No attempt should be made to coagulate other than for therapeutic purposes. It is unsafe to use this procedure beyond the physiological limit.

Care should be exercised in the selection of the diathermy apparatus to be used in the removal of tonsils. A high frequency machine of low voltage, the proper adjustment of controls, and an absolutely accurate meter reading indicating the degree of heat being generated are essential. The speed of oscillation should be about 1¼ million per second, delivering a smooth current which insures the patient against spark or faradism. A high voltage machine may cause sparking and tends to carbonize the wound and prevent prompt resolution.

The type of instruments selected also play an important role. The Dillinger and Gross needles are scientifically shaped and are to be recommended. These needles are of the proper proportions, tapered in various ways, neither too blunt nor too slender, assuring coagulation at the tip of needle. It is very necessary to avoid using a long slender needle which may not coagulate down to point, producing only a penetrating wound, possibly of the blood vessels, without hemostatic effect.

The author prefers his own right angle, non-conductive tongue depressor which assures a good view of the operative field. It is hardly possible to improve upon the popular pillar retractor designed by Gross.

ANESTHESIA

Personal equation enters into the selection of the anesthetic and should guide the surgeon in his choice. I prefer cocaine hydrochloride crystals, but in certain types of individuals it has been found necessary to resort to the use of a 2 per cent solution of nupercaine. Topical applications are made to tonsil and anterior pillar by means of a cotton tipped applicator, first moistened in nupercaine or adrenalin solution, then dipped into cocaine crystals and applied by gentle massage until the anesthesia is complete; this may require two or more applications depending on the type of patient. Only in rare instances have we resorted to the use of cocaine spray to control pharyngeal reflexes; this minimizes the amount used and affords additional security against cocaine intoxication. Electrocoagulation is a dehydrating process, hence the inadvisabilty of injecting any fluid into the tissues, causing them to become waterlogged, thus tending to diffuse the current. Full cooperation on the part of the patient should be required throughout the preparation and procedure.

TECHNIC

After cocainization, the patient is placed upon the table in the recumbent position, with two pillows beneath the head which raises it to correct operating angle. The apparatus which has been previously connected is checked. A piece of block tin 8 by 10 inches is connected by means of an insulated cord to the indifferent outlet of the machine, and placed against the skin in dorsal region of patient. The curved needle which is properly protected by a rubber sleeve, extending from ¼ inch from the tip well up over the junction with the bakelite handle, is connected to the low voltage outlet by an insulated cord which is secured to

the side of the table to avoid interference with the work of the operator. Absorbent cotton packs are placed above and below in the gingivo-buccal margins, extending from the canine to last molar teeth, for the purpose of preventing the flow of saliva over the anterior pillar into the tonsillar fossa. These packs and the use of cotton mops by the assistant maintain a nearly dry field, which is necessary for successful results in the dehydrating process of coagulation. The operator's attention to this detail will lessen the number of treatments and assure a more nearly perfect result.

It is good technic to know where the point of the needle is before the current is applied. The depth to which the needle is inserted into the tonsil is of importance, never more than one-eighth to one-quarter inch, depending upon the amount of tissue to be coagulated. Always direct the needle point toward the center of the tonsil and at the same time allow a safe distance from the periphery, as heat spreads in all directions from the active electrode. Avoid inserting the needle into a crypt as this may cause an abscess.

It is convenient to have a well trained assistant retract the tongue, giving the operator a good view without discomfort to the patient. The surgeon should assume the responsibility of retracing the anterior pillar well away from the field of operation, and also avoiding the posterior pillar and plica-triangularis, as injury to these structures may result in severe reaction and post-operative discomfort.

We are now ready to begin the actual work of coagulation. Introduce the needle about one-eighth inch into the tonsil and apply the current, by stepping on foot switch; in from one to three seconds a white ring appears around the needle. However, the time is not defined by seconds, but rather by the reaction of the tissues to the active electrode; when the white ring appears, release the current and remove the needle. This procedure is repeated until the entire surface of the tonsil has been covered with coagulated areas about one-quarter inch apart. This interspace between coagulated areas is necessary as over-coagulation produces a fast and extensive sloughing with probable hemorrhage or fibrosis. This can easily be avoided by paying strict attention to detail.

Should slight bleeding occur during the process of treatment, I have found it convenient and satisfactory to use the heel of a curved needle in coagulating the bleeding area.

The tonsil, twenty-four hours after treatment, reveals that the white rings have coalesced forming a greyish mass which later sloughs.

The second and subsequent treatments of the tonsil require greater precaution. After several treatments the tonsil will show considerable reduction in size, and care is necessary when inserting the needle to avoid penetrating the capsule; simply lift up the remaining tonsillar tissue out of its bed and coagulate gently.

Painstaking care must be exercised in removing the lobe in the supra-tonsillar space. It is not advisable to attempt the removal of too large an area in this region at one treatment, as the apex formed by the pillars is very narrow, and since heat from the current spreads in all directions, there is danger of injury with severe reaction to these structures, resulting in scar tissue formation, which may make subsequent treatments difficult or even impossible. I recommend gentle contact of the needle point only, using a weak current to coagulate tissue in this region. This procedure is repeated until extirpation is complete.

Near the completion of electrocoagulation the operator sometimes finds redundant tissue and thickened plicas, so often mistaken for tonsil tissue. Repeated coagulation with the heel of the needle will reduce this redundancy, leaving the pillars apparently free, while only a thin membrane remains of the plica. Haiman uses the so-called cutting knife to remove completely these redundant portions and plica. When the tonsil has been reduced to a small tab or two, no attempt should be made to hook or puncture the tissue; simply rest the needle against the remaining tonsillar tab and ap-

ply a short electrical current. The final examination should reveal a fossa without tonsil, lymphoid or fibrous tissue present and with the pillars and plica-triangularis intact.

REPORT OF MISCELLANEOUS CASES

In my early experience one patient with severe bleeding was removed to the Hospital, anesthetized and bleeding controlled, later discharged after an uneventful recovery. I attributed this hemorrhage to the use of a long slender needle producing a penetrating wound without hemostatic effect.

Five other cases complained of slight bleeding which was controlled by the use of ice and lavoris. These patients continued treatment until discharged.

My first patient failed to return for a second treatment. Two other cases failed to complete treatment. One received several treatments from a fellow colleague and several from me with unsatisfactory results.

By this method I have removed the tonsils of seven children ranging in age from six to twelve years. In three of this group the adenoids were removed by using a long flexible electrode, adapted to anatomical conformation of part; this procedure was performed through a Yankauer speculum, after cocainization of naso-pharynx.

In a series of two hundred cases about ninety per cent have shown very satisfactory results. Especially pleasing have been the cases completed during the past year. The experience gained from a large number of treatments, with greater precaution and attention to detail, has contributed to better results in these later cases, and has convinced the author that time and painstaking care in the use of electrocoagulation, will reward the operator with results comparable in every way to those obtained by the use of classical surgery.

BIBLIOGRAPHY

1. Dillinger, G. A.: Electrocoagulation of tonsils, Med. J. and Rec., 129:450, 1929.

Tonsillectomy by diathermy, Am. Jour. Surg., 9:294, 1930.

2. Gross, W. A.: Electrocoagulation of tonsils, Med. J. and Rec., 135:214, 1932.

3. Balmer, F. B.: The evaluation of electrosurgery of tonsils, Arch. Physical Therapy, 12:10, 1931.

Refinements in surgery of tonsils including electrosurgery, Ill. Med. J., 60:458, 1931.

4. Skillern, Jr., S. R.: The last word in tonsillectomy including diathermy or electrocoagulation, Virg. Med. Month., 55:723, 1929.

5. Doane, L. Leo: Electrocoagulation of tonsils with special reference to a new technique, Arch. Physical Therapy, 10:495, 1929.

6. Haiman, J. A.: Diathermy electrocoagulation of tonsils, read before the Academy of Medicine, New York City, December 1930.

DISCUSSION

Dr. Charles L. Cox (New Orleans): The essayist has covered this subject very thoroughly as to the indications and technic in electrocoagulation. I just wish to emphasize a few points.

It is a very difficult procedure to remove the tonsils entirely by electrocoagulation. It can be done, however.

Bleeding has occurred in my practice in about the same percentage as in surgical removal. However, in no case has it been very severe.

I think the greatest use we have for electrocoagulation is in removing tonsil tabs. These patients have at one time gone through the hospital, and they do not wish to return. When we find this infected tab we can remove it in two or three sittings and the patient is very pleased.

Dr. A. I. Weil (New Orleans): I want to preface what I have to say by stating that I have no quarrel with the essayist when he says the electrocoagulation of tonsils is advistable in certain selected cases, but he did not emphasize as I feel really should be emphasized, just exactly the limited selection which would guide us in deciding to use this method of procedure.

There are cases, as we all know, in whom surgical procedure, such as tonsillectomy, either with general or local anesthetic, is practically excluded, and in my opinion in those cases alone, are we justified in resorting to this treatment.

Why should we limit it to those cases? In the first place, I agree with the essayist that this procedure is, I will not say without danger, but I will say in proper hands it is no more dangerous than the ordinary tonsillectomy. But on the other hand I believe it is quite as dangerous. The ordinary tonsillectomy is a procedure carried out without injury in the majority of cases, and the technic the essayist described to avoid complications in this treatment shows it is not devoid of danger. I think there is little choice as to danger between the two methods, and it is probably in favor of the surgical tonsillectomy rather than the electric tonsillectomy.

There is no question that the tonsil can be diminished in size by this treatment and possibly removed in toto, but it is possible that the tonsil may not be removed in toto. We know that electrocoagulation of tonsils causes a coagulation of the tissue, and will, in a good many cases, defeat the very purpose for which we are

operating. That is, instead of removing the tonsil in toto, it closes a crypt, so that the injury will be more marked because we have sealed the crypt and consequently sealed in the infection instead of allowing it to drain. I think you will agree that it is not healed in that case.

Also where we have gotten the tonsil reduced to a very small size there is the possibility, even with the most skillful application, of getting our needle ino the sub-tonsillar tissue, or into the capsule, and causing some injury.

In removing tabs of tonsils remaining after a tonsillectomy, where there is only a small portion of the tonsil left, and especially in that portion at the base of the tongue, and that is where some tonsil is left as a rule, I believe this method has a very distinct applicability. But I do not think in a meeting of this sort or any sort of meeting we should advocate the use of electrocoagulation as a method of choice, opposed to the surgical treatment of diseased tonsils, except in those cases where the surgical removal of the tonsil, with either a general or local anesthetic, is not advisable.

Dr. R. S. Crichlow (New Orleans): I began the use of electrocoagulation about three years ago, and in that time I have treated about eighty-five patients. I say "treated", because all of the eighty-five treatments have not been satisfactory. In about fifty of the eighy-five I would consider that I have absolutely removed the tonsils, as clearly as though I had operated on them under surgical anesthesia. In the rest, I believe while they may have been helped a great deal, yet the work was not satisfactory.

The essayist referred to the fact that we should use this in selected cases. It has been my observation that those individuals who have large pedunculated tonsils that are mushy, do not respond well to this type of treatment, for the reason that if you attempt to do too much at one sitting, in order to cut down the number of sittings, the result will be that the patient will suffer even more than he would from the surgical procedure. But with the smaller type of tonsil, and that type of buried or fibrous tonsil, this works wonderfully well, and you can clean the fossa just as beautifully with this method as you can with the knife, and with the least inconvenience to the patient.

It has been my experience that in comparing these patients and the anesthetic to be used, I like the cocaine hydrochloride, but I do not like to use it in crystal form. Ten per cent is as strong as I ever use, and by massaging the anterior pillar and then slightly massaging the tonsil and waiting for about ten minutes, we get splendid anesthesia.

I do not go through the procedure that the essayist does, in placing them on the table. They sit in the chair and carry on a conversation, and the treatment is practically the same as a general throat treatment. By getting their thorough cooperation, I find that I get splendid results.

However, I do not feel that we should use this method in the process of attempting to remove a pedunculated tonsil, unless it is in that condition where general anaesthesia is contra-indicated, such as diabetes, tuberculosis and the like.

Dr. William A. Wagner (New Orleans): I enjoyed the paper very much, because it brings up the old subject about which there has been so much controversy for a few years, coagulation of tonsils. I personally believe it has a place in otolaryngology, but the controversial question is as to how much value it has. It is my frank opinion that it has very little, but some, value in its proper place, and much value for some individual cases. The type of case in which I find it of most value is the type of case in which the patient is suffering from a condition which renders him unable to be subjected to the usual amount of shock in surgery, that amount of shock that is necessary in surgical tonsillectomy, that amount that is produced during a tonsillectomy, whether the anesthesia be local or general. Also that type of patient who is an old individual, who has reached sixty or more and is a poor surgical risk because of a heart condition, and is confronted with diseased tonsils and cannot stand much shock. In my opinion that individual, although requiring tonsillectomy, is not a subject for surgical risk wherein the total amount of shock is created at one time. Such patients may be subjected to electric coagulation with shock that might be treated in small amounts over a period of time, with intervals for recuperation.

That is the only type of patient that I today care to subject to electrocoagulation. It is a patient whom I wish to subject to tonsillectomy with a minimum amount of shock, with intervals of recuperation, limiting my local anesthetic, limiting my surgical procedure.

I believe the paper is timely. I believe surgical coagulation was forced upon us otolaryngologists in a poor manner. It came to us through the local press, the radio, and even the medical press, and certainly through the laity, and it was just pressed upon us and was delivered to us in an abnormal way, in a deceptive way, by the manufacturers of the instruments and consequently we just gulped it in, not realizing its real value.

I should like to leave this last word: It is my opinion that it has its place in otolaryngology, but very limited.

Dr. L. W. Alexander (New Orleans): There is one type of case which has not been mentioned, and I have had several of them, where I have used this method with some degree of comfort to the patient. That is the carcinoma case. I do

not believe the essayist mentioned carcinoma. I have used it on some cases and have made the patient far more comfortable, and I believe the life expectancy has been lengthened.

My technic may not be as good as the essayist's, but I have had one very servere hemorrhage from removing a tonsil tag in the lingual region, in which I had to resort to infusions and almost lost the patient.

Dr. M. P. Boebinger (New Orleans): I want to thank the gentlemen for discussing my paper, because it is by criticism that we learn. I want to thank Dr. Cox for opening the discussion, and I want to say to my good friend Charlie, stick to it, as it has real merit. Dr. Weil, I want to thank you, too, and try to answer some of the questions.

I say that it is advisable to use electrocoagulation any time, in any case, where there is contraindication to surgery. There is no need in my saying that I, too, have done my share of surgery, that I have lost cases by surgery, that I have seen many complications, a great deal of shock and disaster and disappointment, and I see no reason why we should be too harsh on electrocoagulation. It is not new, it is old, at least twenty-five years of age. It has gone beyond the stage of babyhood, and has reached the stage of adult life, and has been used very freely in France and Germany. In a letter I had recently from Dr. Dillinger in this country he indicated that he has done sixty or seventy thousand treatments, probably ranging from three to five thousand cases. He has had very little disappointment in its use. He speaks most glowingly of the method. In heart cases, tuberculosis, nephritis, or any cases where you cannot resort to surgery, it is very applicable. It haa real merit.

It has its hazards in the hands of the tyro. It is dangerous, in cases where we put it in the hands of the irregular type. It has received a black eye, probably because men began to think, "Why, I can make real money on this method," and they have brought it into disrepute. We have had lots of knocks on it, but there are quite a few big men in this country who have experimented with it, and they would treat just a few cases and then give it up as not being a very good method.

I say that you can positively remove every piece of tonsil tissue. I wish I had had more time to show some slides. I attempted to bring some moving pictures of some of the work I have done. You can positively remove every piece of tonsil, down to the capsule. You need not worry about having abscesses in a little remaining tissue. In that case you really fail to remove the focus. This tissue must be removed.

Try never to put your punctures too close together, and never try to remove your tonsil in four or five treatments. It cannot be done.

Dr. Crichlow does not like cocaine crystals. When I came to the subject of anesthesia I said the personal equation should guide the surgeon. Therefore, I will stop there.

You do not like the table. Again I say, that is the personal equation. I like it. If you do not like it, that is all right.

Dr. Wagner, I believe it has a real place in surgery, and, as I said in my paper, it has real merit. It is an adjunct to the classical surgical treatment, but does not replace surgery.

Dr. Alexander brings out the point of having used it in carcinoma with most excellent results. I have used it in tuberculous patients, but I have not used it in any malignant cases. I have had nice results with tuberculous cases, and I will say again that because you had severe bleeding in removing a tab, you are like most of us, in that you try to do too much at one sitting.

THE ADVANTAGES OF REPAIRING OLD BIRTH CANAL INJURIES AT THE TIME OF DELIVERY*

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AND
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NEW ORLEANS

Childbirth is rarely without some degree of injury to the perineum, anterior vaginal wall and the cervix and, if allowed to remain unrepaired over a period of years, these injuries result in numerous gynecological symptoms, pronounced nervousness, and, eventually, semi-invalidism. During recent years many obstetricians have come to advocate repair of old lacerations immediately after a subsequent delivery in order to put the patient in good physical condition following delivery and avoid the years of neglect usually following childbirth injuries. The procedure is both prophylactic and curative in nature and the patient is dismissed fom the hospital in the best possible physical condition, a realization of one of the paramount aims of modern obstetrical care.

PROPHYLAXIS

Although this paper is primarily concerned with old injuries, it is appropriate that we mention some of the more important prophy-

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lactic measures. Observance of the following precautions during labor and delivery will do much not only to decrease the frequency of injury, but also to minimize the extent and severity:

1. Both bladder and rectum should be empty at the beginning of delivery.

2. In institutional practice, or its equivalent, episiotomy should be performed routinely on all primiparas.

3. Abnormal fetal positions should be corrected whenever possible.

4. Analgesic and anesthetic agents should be intelligently administered during labor and delivery.

5. Meddlesome interference, including the too early use of forceps and the administration of oxytoxic agents, such as pituitrin, should be avoided as long as the fetal heart is normal and the condition of the mother satisfactory.

6. All action on the part of the accouheur should be characterized by careful deliberation rather than frantic haste.

In spite of the application of these prophylactic measures, injuries occur in many cases of abnormal obstetrics requiring instrumentation and in cases which must be handled under poor conditions on account of economic and environmental circumstances. Numbers of women thus have pre-existing injuries at the time of a subsequent confinement and it is this group in which we are interested at present.

REASONS FOR IMMEDIATE REPAIR

The outstanding reason for performing repair of old injuries at the time of delivery are as follows:

1. It is a safe procedure as only one anesthetic is necessary.

2. It is sound surgical practice and the end-results are superior to those of the elective operation.

3. It prevents procrastination on account of fear. Few patients will return for operation after confinement until irreparable damage has been done through atrophy and retraction of the soft structures.

4. It eliminates the necessity for many major operative procedures, such as hysterectomy, as early repair of the pelvic floor prevents procidentia and acquired retroversion. (Cooke has called to our atttention the fact that long-standing procidentia and acquired retroversion produce passive congestion resulting in fibrosis, a condition usually necessitating hysterectomy.[4])

5. It relieves the nursing mother of many local and constitutional symptoms and preserves the nervous system at a time when she is most needed by her family, thus making her better able to nurse and care for her children and to cope with ordinary domestic problems.

6. It results in improved sexual life and greater domestic happiness, preserving many homes which might otherwise be wrecked. Neglected lacerations with their accompanying discharge cause unsatisfactory sexual life, worry and unhappiness and not infrequently become factors in divorce.

7. It is of great economic advantage to the patient as one anesthetic and one period of hospitalization and forced convalescence suffice for both delivery and repair.

8. The patient is discharged from the hospital in the best possible physical condition, a realization of one of the paramount aims of modern obstertical care.

9. Routine repair of all birth canal injuries at the time of delivery would result in a material decrease in the percentage of malignancy as it is a conceded fact that neglected lacerations constitute a most important predisposing cause of cancer in women.

PRENATAL CARE

Repair can be done at the time of delivery in more than ninety per cent of all women needing such operation provided they receive proper prenatal care. The best type of supervision includes the following:

1. Examination of urine and observation of blood pressure at regular intervals.

2. Attention to weight and diet with the addition of calcium and vitamins as necessary.

3. Treatment of local vaginal infections, especially trichomonas vaginitis and monilia infection. This not only puts the patient in condition for repair at the time of delivery, but also lowers maternal morbidity and mortality, as Bland has shown in his large series of cases.[1]

4. Complete physical examination, including blood study, to determine the general condition

of the patient, and energetic treatment of all constitutional abnormalities.

CONTRAINDICATIONS

The condition of the patient after delivery and the circumstances under which the case is handled may present contraindications to immediate repair, such as:

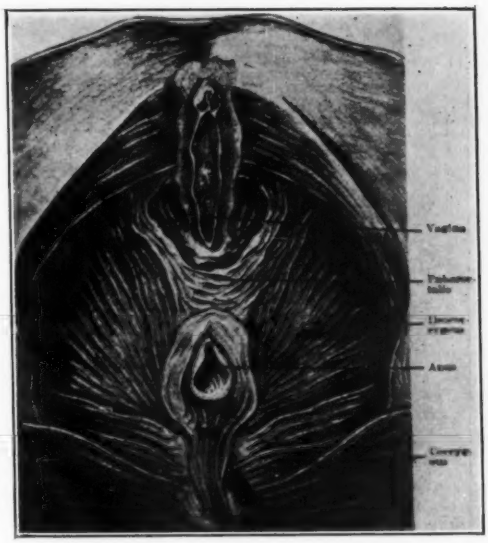
1. Home delivery, in the majority of cases.
2. Excessive loss of blood in the third stage of labor.
3. Excessive trauma from operative delivery.
4. Exhaustion or shock.
5. The presence of organic constitutional dysfunction or local infection.
6. Insufficient time for proper preparation.
7. Lack of trained help and adequate equipment.

When the condition of the patient does not permit immediate repair, the advisability of intermediate repair from twenty-four to forty-eight hours after delivery may be considered.

SURGICAL REQUIREMENTS

The surgical requirements essential to successful repair of old birth canal injuries at the time of delivery are as follows:

1. Hospitalization or its equivalent.
2. Strict asepsis, with the patient re-prepared and re-draped after delivery.
3. Good anesthesia, preferably general.
4. Knowledge of the extent of injury prior to delivery. (Preferable but not essential.)
5. Thorough knowledge of the anatomical structure of the vaginal outlet.
6. Adequate training in "gynoplastic" surgery.
7. Detailed written instructions to the nursing staff for post-operative care of the perineum.



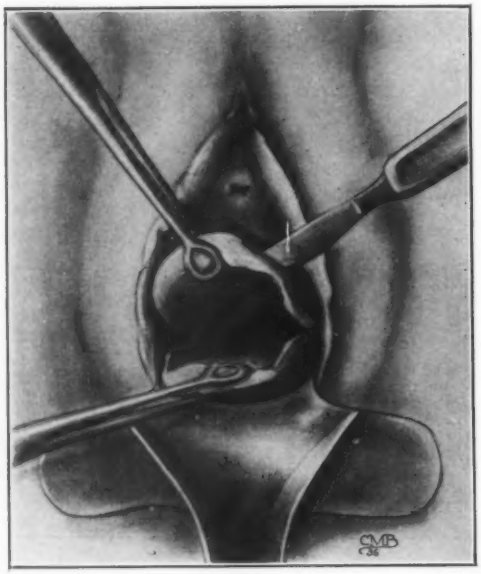
In a nulliparous woman, you will note that it is impossible to isolate two separate muscles. Wilbur C. Smith believes that the levator ani and the sphincter ani are essentially one muscle and that during repeated deliveries these connecting fibres are torn, causing a separation of the muscle fibers that connect the main body of the levator ani from the fibers that encircle the anus, thus giving the appearance of two separate muscles.

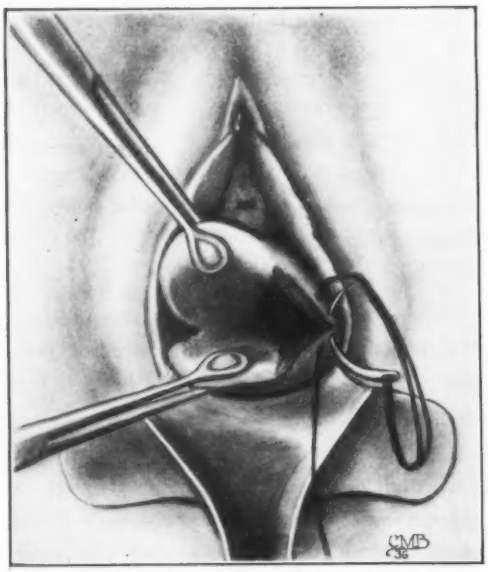
TECHNIC

When planning to repair old lacerations at the time of delivery, we routinely perform a perineotomy, going through the mucous membrane of the vagina and exposing the fibers of the sphincter and muscle. Nothing further is done until delivery is completed, adequate time given for separation and expulsion of the placenta, and all bleeding controlled. The patient is then anesthetized, the field of operation re-prepared and the patient re-draped.

CERVIX

The cervix is carefully examined and the extent of injury determined. Before attempting any operative procedure, it is essential to secure good exposure. The patient must be placed on a bed or table, as for an elective gyneological

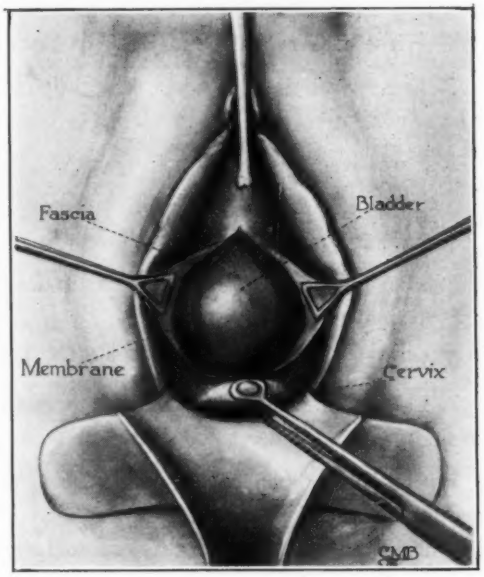


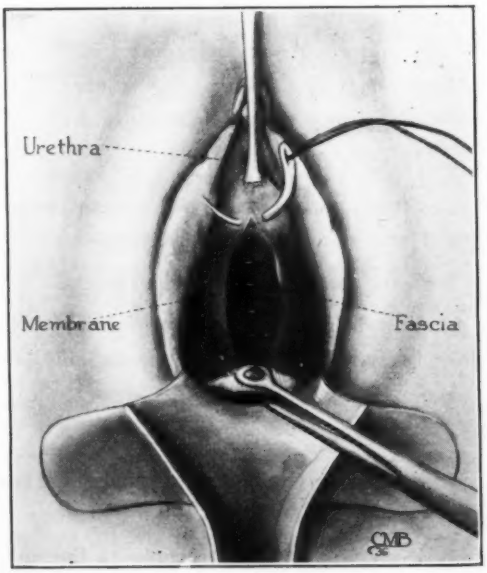


operation, and either a Bubis retractor inserted or capable assistants used to expose the field. In order to decrease the loss of blood, 1 c.c. of obstetrical pituitrin is injected into the cervical tissue before the operation is started. Scar tissue is then dissected away and the freshened edges snugly coaptated with number two chromic catgut.

CYSTOCELES

In repairing cystoceles the technic is essentially the same as in the elective operation. Ten to 15 c.c. of one-half of one per cent novocaine solution, to which has been added 4 minims of adrenalin, is injected to facilitate blunt dissection and limit the bleeding. A tier of



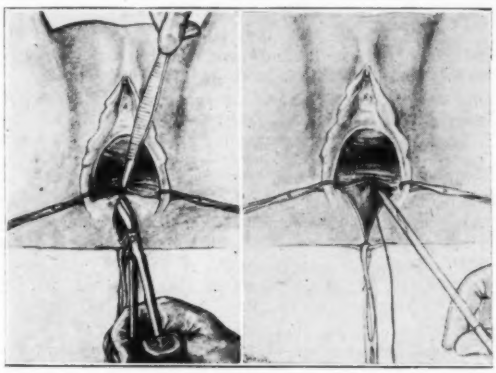


sutures of number two chromic catgut is used to coaptate the deep fascia, the redundant

mucous membrane is removed and another tier of number two chromic catgut sutures is used to coaptate the mucous membrane of the vagina.

PERINEUM

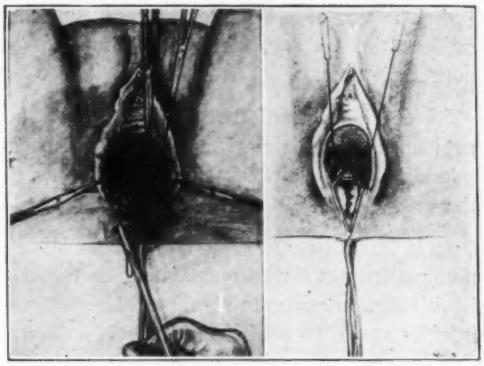
For the repair of perineal injuries we use the technic of Hill's perineorrhaphy as described in one of our former papers.[6] A pair of Mayo scissors is used to raise the vaginal wall from its bed and the lateral flap then lifted up to expose the perineal body, or pubo-rectalis, on each side. At this time the redundant vaginal mucosa, including scar tissue, is removed. A round, curved needle, held in a needle-holder, is used to bring the muscle into view and to place the suture of number two chromic catgut, care being observed not to break the needle. The



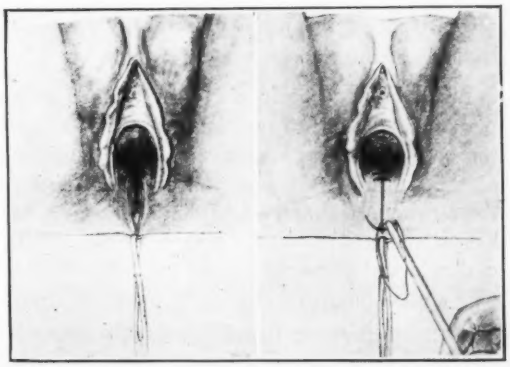
suture is pulled through and the end held by an assistant while the fascial covering of the sphincter on the left side is picked up, then the sphincter at the bottom of the wound and finally the fascial covering on the right side and the pubo-rectalis on the same side, from below upward, to complete the first suture. Three sutures are placed in this manner.

An important precaution which we always observe in placing these deep sutures consists in slipping on a second glove, a size larger than usual, over the one already worn and inserting the index finger in the rectum to be sure that the deep sutures do not penetrate the rectal wall. Naturally, this procedure handicaps the operator unless he has an excellent assistant and may be advantageously substituted by tightly rolled sponge, saturated with K-Y jelly or vaseline and grasped in a sponge-holder, inserted in the rectum to outline the rectal wall. Care must be observed in the amount of pressure exerted on the sponge-holder which is held in place by means of a Smith hook through the handle and towel until all deep sutures are placed.

The sutures are then pulled up and tied, with particular care not to tie them too tightly, just enough to approximate the tissues snugly. Then the mucous membrane of the vagina is coaptated with interrupted catgut sutures and a figure-of-eight suture placed. This figure-of-



eight suture serves a three-fold purpose: first, it re-enforces the deep sutures by bringing the pubo-rectalis muscle together; second, it restores the relation between the vaginal mucous membrane and the deep structures; and third, it coaptates the overlying mucous membrane of the vagina. Several interrupted sutures of number two chromic catgut are inserted to coaptate the deep fascia and the skin and superficial fascia are closed with subcuticular stitches of 00 chromic catgut.



POSTOPERATIVE CARE OF THE PERINEUM

Postoperative care is highly important to good surgical results in perineal repair and should include the following:

1. A five per cent mercurochrome wick over the line of suture for twenty-four hours.

2. Daily instillation of two drams of five per cent mercurochrome into the vagina through a small rubber catheter.

3. Mild laxatives, such as petrolagar night and morning, and flushes if necessary.

4. The use of a light to the perineum three or four times a day, forty-five minutes to one hour each time.

5. A minimum of two weeks in bed and avoidance of straining, heavy work and marital relations for eight weeks, until the tissues are thoroughly healed.

It is interesting to note from personal communication that eleven outstanding obstetricians in this section advocate repair of old birth canal injuries at the time of delivery notwithstanding the fact that they differ in opinion as to the amount of work advisable at that time. Their statements represent several thousand cases and not one reports unfavorable results. Bubis, Pride and Bloss advocate routine repair of all birth canal injuries and also amputation of the cervix and hemorrhoidectomy; Johnston and Johnson, and Cowan repair old lacerations of the perineum routinely; and Ross, Garber, Bartholomew, Cooke and Hinkle perform repair only in selected cases. Other gynecologists and obstetricians throughout the country, too numerous to mention, also advocate repair of old birth canal injuries immediately after delivery.

We routinely repair old lacerations of the perineum, uni-lateral and bilateral tears of the cervix and moderate cystoceles, the condition of the patient, of course, always determining the amount of surgery advisable. In cases of long-standing procidentia and unusually large cystocele and rectocele we do not advocate repair at the time of delivery as many of these patients need more than simple colporrhaphy and perineorrhaphy.

Contrary to general impression, the structures are recognizable at the time of delivery and if they are handled with usual surgical care they are not fragile; there is very little if any more bleeding than in the elective operation; and the lochia is normally free from pathogenic organisms and if there are no pockets for stagnation, which later favors infection, it does not interfere with healing.

CONCLUSION

Results from immediate repair of old lacerations are in direct ratio to the skill and experience of the operator just as in the elective operation. Both time and experience have proved the rationale of the procedure.

REFERENCES

1. Bland, P. Brooke: Trichomonas vaginitis in pregnancy, Surg. Gyn. and Obst., 53:759, 1931.

2. Bloss, James R.: Advisability of repairing old lacerations of cervix and perineum at time of subsequent delivery, South. Med. J., 27:5: 439-442, 1934.

3. Bubis, J. L.: Puerperal gynecology, Amer. J. Surg., New Series 17:2: 194-205, 1932.
The physical and economical advantages of gynoplastic repairs for old lacerations at or shortly after childbirth, J. Mich. State Med. Soc. 30:418, 1931.

4. Cooke, William R.: Observations on certain features of the pathology, symptomatology, and treatment of retroversion, Am. J. Obst. and Gynec., 15:4:493, 1928.

5. Pride, W. T.: Repair of old lacerations at the time of delivery, South. Med. J., 23:9:781-785, 1930.

6. Sellers, T. B., and Sanders, J. T.: The prevention and management of birth canal injuries and the anatominal repair of old lacerations of the perineum, N. O. Med. and Surg. J., 83:11:757:765, 1931.

7. Smith, Wilbur C.: The levator ani muscle. Its structure in man and its comparative relationships, Anat. Rec., 26:175, 1923.

8. Titus, Paul: Episiotomy and the immediate postpartum repair of both old and new perineal injuries, Amer. J. Surg., 3:499-505, 1927.

DISCUSSION

Dr. H. Vernon Sims (New Orleans): I have certainly enjoyed listening to Dr. Sellers' most interesting and instructive discussion of this subject, which is rather new, in a way, though we have discussed it among ourselves for quite a while. He has certainly presented it in a most detailed manner, so that the points he brought out are very clear, and his illustrations follow up the subject which is important to us. We always enjoy a review of the anatomy of any subject under discussion.

There are one or two points that occur to me that were not emphasized, perhaps, that I should like to bring out. One is the extreme importance of the immediate repair of recent injuries at the time of each delivery. It has always been very

interesting to me to see what good results we get with the immediate repair of injuries, no matter how extensive they are. They usually seem to heal by primary union. Therefore, I have taken it upon myself to emphasize that feature of the discussion, in order to avoid the necessity later on of repairing old injuries from previous deliveries.

If we undertake the repair of these old injuries, another very important point to me is the importance of good exposure, at the time. That applies to the repair of recent injuries as well, the extreme importance of good exposure, proper facilities and well trained assistants. These things are very important, and make the repair simple. If you have the proper facilities, the proper exposure and the proper assistance, it is simple rather than difficult. That applies to all kinds of plastic operations.

One little disturbing thought occurred to me. I just mention it in passing, and ask Dr. Sellers if he will mind commenting on it. That, is, is there a possibility that we might increase the incidence of puerperal infection by undertaking the procedure in a number of these cases? It has always been my feeling after having completed a delivery in a case that had been handled without the necessity of a vaginal examination, without the necessity of suturing or any vaginal manipulations, that if any puerperal infection developed I had no worry whatsoever. And I should like to find out if there has been a long series of follow-ups with the idea of checking the possibility of whether there has been an increase in puerperal infection incidental to this work. That would probably be the only thing that would make us hesitate. I could see the value of saving the patient another trip to the hospital by repairing things just as they are, but we should be sure of not running the chance of increasing puerperal infection.

The question of the amount of work to be undertaken comes into play. That, of course, in this procedure, is like in all other procedures, the proper selection of cases, so that each case should be individualized. As Dr. Sellers described his routine, a case must fit certain classifications before she is eligible. He has thoroughly covered the question of shock, hemorrhage, and what kind of a labor the patient had. There is nothing that I could suggest along those lines

Finally, we have been doing quite a lot of work here in gynecology, on sacral analgesia, and recently have reported some cases in obstetrical work. It is a hobby of mine, and I hope you will pardon me for mentioning it for a moment. Sacral analgesia is satisfactory in all gynecological procedures, provided it is not necessary to open the abdomen. I mean when operating on the genito-urinary tract, vagina, perineum, cervix, rectum and anus. It is satisfactory. I have used it on 500 cases in the last eight or ten years, without having to resort to general anesthesia in any case.

Sacral analgesia would be indicated in this type of work provided it is timed just right, and I should like for some of the men who are interested in gynecology and obstetrics to try sacral on some of the cases, using a one per cent novocaine solution, injected into the sacral canal. Try it out and see if you are not satisfied with it.

Dr. D. C. McBride (Alexandria): Mr. Chairman, I think it is well for Dr. Sellers to bring this subject to our attention at the present time. It is something that is being done. Dr. Pride of Memphis was the first to call my attention to the procedure. I was very skeptical when I first heard his paper on this subject, but I gave it quite some thought, and I think it just goes to show what can be done.

Do not you fellows go home and try this thing out in the country, where you have a granny and a bunch of women hanging around the wall saying, "If there is anything I can do please call on me." About all they can do is make a good cup of coffee. The thing Dr. Sellers emphasized is the procedure must be done in a hospital, with assistants. I have had very few cases, but successful, in each case. However I am still very skeptical about it.

I always try to repair the cervix, if there is any recent injury, provided I am in the hospital. Do not try this thing away from trained assistants, away from the hospital.

Dr. E. L. King (New Orleans): I want to second the word of warning that Dr. McBride has uttered.

I know this work has been done quite extensively. Dr. Bubis has reported well over 1500 cases, I think, Dr. Bloss has reported a good many, and so have Dr. Pride and Dr. Sellers. Still we must bear in mind that it is not possible to sterilize a birth canal and get rid of all the bacteria. Luckily for us, most women are immune to most of the bacteria that are present. The question of the pulling down of the cervix to repair it, to my mind increases somewhat the possibility of infection. Another point is the difficulty of recognizing the old lacerations of the cervix. I think it is wise to repair the new lacerations, if we are in the hospital, but in a home it is hardly wise even to do that.

I should like to ask Dr. Sellers one or two questions. How about this patient in subsequent deliveries? Does she suffer another laceration or more relaxation, and is it necessary to do another repair at that time?

Another point I think should be stressed is that the sutures must be very carefully placed, not tied too tightly, because of the edema that is present, and the repair itself must not be too snug.

We are liable to overdo the repair in these cases unless we are very experienced in the line of work.

As to Dr. Sims' reference to sacral anesthesia, it would appear to me to be rather difficult to time the sacral anesthesia in such a way as to have sufficient analgesia to carry out the repair of the perineum and the cervix. You would have to be very late in labor, in order to get sufficient effects for the repair work. So my attitude would be that it is certainly only a procedure for hospital work, only in the hands of those that are trained, and only to be very carefully undertaken, and that anyone who is going to undertake it should proceed very slowly at first, until he is sure of himself.

Dr. P. B. Salatich (New Orleans): I am sorry I cannot agree with Dr. Sellers. At the time a woman is delivered, the parts are not normal. They are swollen, with muscular relaxation, almost muscular paralysis, and it is quite hard even to find a recent laceration of the cervix, for instance. Looking around and digging around and cutting around an old laceration, I think is poor surgery. I was one of these enthusiasts several years ago, and used to repair cervices immediately after the operation, but with the ones I did not disturb, nature was so kind, that there was a small percentage of the cervices badly lacerated. Nature will heal them up and they look pretty good afterwards. It is all right to repair a recent laceration, and that should be carefully done, not in the cervix, but in the perineum.

I believe if you adopt a procedure of doing an episiotomy, a real episiotomy, on all primiparas, you will not have a laceration as a rule on the next delivery. These tissues absorb catgut so quickly that if you do a perineorrhaphy, when you look at your patient when she leaves for home you will find a wound there, and nature is healing it by granulation. I use silkworm. I use catgut in the vagina, high up, and use silkworm on the perineum, and that remains there until I remove it, and I get a good perineum. You do an amputation of a cervix, and if you use catgut without using a tension suture of silkworm to hold those flaps in apposition, you will find the flaps of the vagina wide open, instead of being well placed, and you will be surprised to find a patient coming to you with an obliterated os, simply because the vagina flaps were separated, and healed by granulation.

How many of you look at an amputated cervix before the patient goes home? If you use catgut and still like it, look at the cervices before your patients go home.

Dr. Walter E. Levy (New Orleans): I think the question of the repair of injuries is something that is uppermost in an obstetrician's mind, and I heartily agree with Dr. Sellers in one respect, that is, the prophylaxis of injuries by means of the proper conduct of labor and by means of the episiotomy. I think this was brought out in this room in the discussion before the Central Association of Gynecologists and Obstetricians.

I am convinced that all the immediate injuries should be repaired, particularly those of the vagina, either anterior or posterior, but I am rather inclined to the views of Dr. King and Dr. Salatich regarding the old injuries. In the first place, the dragging down of this cervix into a frankly infected field, to me, is playing with fire. I believe it was Dr. Bland Sutton, who said God placed the rectum too near the vagina. You are playing with fire in dragging that cervix down. Traumatized tissue will still not stand infection.

I am convinced that fairly routine repair of old injuries is going to be discarded. We will not practice it and do not practice it. The thing is this: It increases the number of days in the hospital, and increases the length of time of anesthesia.

I am convinced, furthermore, according to Dr. Sellers' technic, that you must wait until the delivery of the placenta. You are going to wait fifteen or twenty minutes until that separates, unless you mismanage the third stage of labor, and force it out before it is ready to separate. Furthermore, I do think the immediate repair should be done while the placenta is in situ. It keeps your mind off fiddling with that placenta. I think more cases are ruined by the mismanagement of the third stage of labor than any other way.

In the hands of some men, the suggested procedure may be excellent, but I would hate to teach this to students. I think you would make them meddlesome midwives, as the English call them. I agree that if the individual doctor adopts this (and in Dr. Sellers' hands it would perhaps be more successful than in mine), it should be conducted as a hospital procedure.

There is one thing that I never could bring myself to see, and perhaps Dr. Sellers and others here will agree with me, and that is that relaxations of the vagina and retroversion of the uterus are not to blame for all nervous symptoms in women. I think nagging children and other disturbing things in the home bring it more than these injuries.

Dr. Adolph Jacobs (New Orleans): I do not want to reiterate what has been said before concerning the immediate injuries that occur during delivery. That has been fully discussed and we all agree. On the question of repairing old injuries immediately after delivery, I want to emphasize one point particularly that Dr. Sellers has thrown on the screen on a cut he obtained from Dr. Bubis.

I believe Dr. Bubis of Cleveland was a pioneer in this work. He started to do this about twenty

years ago. He has had many adherents and many antagonists. With reference to that cut where Dr. Sellers showed a cervix being operated in the old gynoplastic method of repairing the angles of a cervix, that is almost obsolete today, and we know that will not repair, or rather cure, so to speak the angles of the cervix. But how about the whole circumference that is affected? That would be more easily done later on by a simple cauterization of conization. Furthermore, how can one detect old tears in the traumatized and edematous cervix noted immediately after delivery?

Dr. Sellers: (Closing): We wrote this paper thoroughly cognizant of the fact that there are those who do not agree as to the rationale of this procedure, but after five years of personal experience with careful follow-up of our cases and in view of the results reported by many leading gynecologists and obstetricians in the United States, we had no hesitancy in presenting the subject to you for consideration.

In answer to Dr. Salatich's statement that the procedure is "meddlesome gynecology", we have already stated that immediate repair of old birth canal injuries is a procedure for the trained gynecologist only. I think he is quite right that in the hands of those untrained in gynecologic plastic surgery this would be meddlesome gynecology.

I am surprised at Dr. Jacobs' statement that the technic for repair of old extensive cervical lacerations, resecting the scar tissue and freshening the edges of the lacerated cervix is obsolete. The procedure has given us excellent results for the past twenty years and I hope those of you who have used it to advantage will not substitute for it linear cauterization for the repair of deep cervical lacerations as suggested by Dr. Jacobs.

Dr. King has inquired concerning the effect of subsequent deliveries. We have delivered a number of women whom we previously repaired, simply performing an episiotomy as we would in a primipara. The results have been most satisfactory.

Dr. Sims called our attention to the use of sacral anesthesia in obstetrical and gynecological operative proceduces. I have had limited experience with sacral anesthesia in gyneplastic surgery and none in obstetrics. I agree with him that it has a definite field, especially in gyneplastic surgery and expect to use it in the future in selected cases.

In multiparas with old injuries there should be very little additional trauma to the soft structures; therefore, the danger of infection should be even less in repairing old birth canal injuries than in immediate repair of fresh injuries, the latter procedure causing no controversy. As we have pointed out, Bubis, Pride and Bloss report over three thousand cases with no more complications than would ordinarily arise in a similar group of women not having repair done. We personally have had five years' experience without a single complication and better results with perineal repair than in the elective operation. The danger of over-repairing the vaginal outlet is avoided by recording how much repair is to be done when the patient first presents herself until familiarity with the work produces as accurate judgment as in elective repair.

We emphasize again our statement that the physician with limited experience and training in gynecologic plastic surgery should not attempt immediate repair of old birth canal injuries.

LEIOMYOMA OF THE PROSTATE:

REPORT OF CASE*

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NEW ORLEANS

This case was tentatively diagnosed as hypertrophy of the prostate, and one cannot believe any other diagnosis possible. It was surprising at the time of operation to enucleate two lobes which did not appear or feel like prostatic tissue, and even more surprising to hear the pathologist report them to be leiomyomas. With interest in this field thus aroused records were examined to determine the frequency of this condition. Finding that there are only twelve cases of leiomyoma of the prostate reported, this case is presented as the thirteenth:

J. D. H., a while male, 73 years of age, was first seen in 1924 for hematuria caused by a papilloma of the bladder, which was destroyed by fulguration. At this time the prostate, by rectal examination, was enlarged and felt like hypertrophy. Cystoscopically there was considerable lateral lobe enlargement, but only one ounce residual urine present. The patient was observed for three years without a recurrence of the papilloma. For ten years, until a short time ago, he had been urinating two or three times at night and every two or three hours during the day, passing a fair stream with only slight burning and pain and some urgency. Of late the stream had become smaller and there had been some difficulty in starting the stream, with a feeling at the end of the act that the bladder had not been emptied. One week previous he had an acute retention of urine and since then had been catheterized three or four

*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

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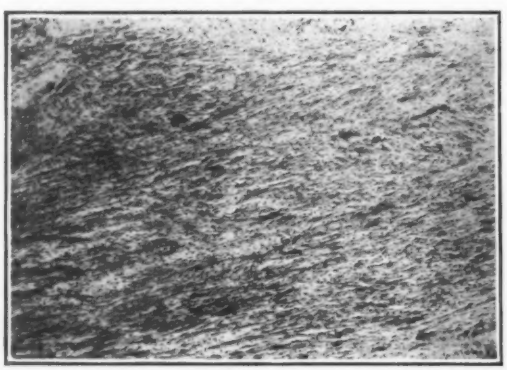
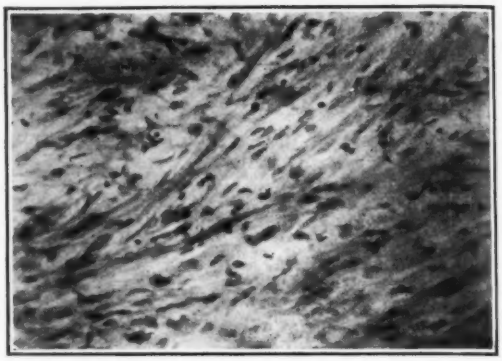
times daily. Catheterization had become progressively painful and had been accompanied by some bleeding.

The patient was a very large man, six feet in height, weighing 265 pounds, with a very large abdomen. Temperature 99.4°; pulse 86; respiration 24; blood pressure 144/74. Physical examination revealed some heart enlargement outward and downward; systolic murmur at apex and another, quite rough, heard best at the aortic area; rate and rhythm regular. The abdomen was so large that nothing could be palpated. Rectal examination revealed a few hemorrhoids, large lateral lobed prostate which was smooth, symmetrical and elastic to feel. Prostatic secretion contained pus and red blood cells. The blood was negative; coagulation and bleeding times normal. Kidney functional test 45 per cent for two hours. A cystoscopic examination was attempted, but due to the elongation of the urethra caused by the hypertrophy of the gland plus the great amount of pubic fat, it was impossible to enter the bladder.

As the cystoscope was not long enough to enter the bladder and the resectoscope being the same length, transurethral resection was impossible. The urine was cloudy, containing 1 per cent moist albumin, many pus cells, many bacteria. Under spinal analgesia a suprapubic cystotomy was done. A tremendous amount of subcutaneous and prevesicle fat was encountered; the recti muscles were found to be quite thin and poorly developed. The bladder was opened widely and an attempt was made to do a retrograde resection by Ballenger's method, but due to the extreme depth of the bladder the vesicle neck exposure was impossible. Therefore a one stage prostatectomy was performed. Two large lateral lobes measuring 3½ and 5 cms. in diameters were easily enucleated, coming away in a smooth capsule which did not resemble prostatic tissue but appeared more like fibroid. The report of the pathologist read: "Specimens consist of two rounded tumor masses





3½ and 5 cms. in diameters. Specimens are encapsulated, regular in shape and of firm consistency. On section they are pinkish gray in color, slightly lobulated in appearance and of firm consistency. Microscopic sections show whorls of smooth muscle fibres with slight connective tissue stroma encapsulated in a fibrous capsule. No prostate glandular tissue present. Diagnosis: Leiomyoma of the prostate."

Convalescence was most uneventful with the exception of some delay in closure of the suprapubic wound due to the thinness of the recti muscles.

In order to bring the literature on this subject up to date the cases already reported have been abstracted:

Labec[1], 1876. This case was discovered at necropsy. The patient was 76 years old, in acute retention of urine; bladder enormously distended. Catheterized, developed pneumonia and died. A tumor arising from the middle lobe of the prostate was found, and section showed the tumor to be made up of smooth muscle fibres.

Damski[2], 1924. Patient was 62 years of age. At operation a large tumor of the prostate was found which gave no clinical manifestations of prostatism. The specimen was the size of a child's head, weighed 180 grams, was grayish-white in color. Sections made throughout the tumor showed smooth muscle fibres only.

Bugbee[3], 1925. Patient 49 years old, in complete retention of urine. Urinary history of two weeks' duration. Temperature 99-100°. A mass in the region of the prostate which fluctuated over the left lobe. External urethrotomy was done, breaking through the prostatic capsule. A soft pliable material exuded. About twelve ounces of such material was removed with sponge forceps. Sections showed this material consisted of smooth muscle fibres and some connective tissue. Nuclei showed mytosis only very infrequently. There were also areas of necrosis and of calcification. Diagnosis was leiomyoma of the prostate. Looks

like a case of degeneration of leiomyoma as seen at times in the uterus.

Rubritius[4], 1927. Patient 70 years of age in complete retention of urine. Suprapubic prostatectomy was done and a mass about the size of two thumbs was shelled out easily. This consisted of several nodules, all composed of interlacing smooth muscle fibres.

Wolman[5], 1929. Patient 73 years of age came in with an enlarged, rather hard prostate gland, and also a large intra-abdominal tumor at the level of the umbilicus. Died two months after admission, and a necropsy showed a sarcoma of the upper pole of the left kidney with metasases to the mesentery, retro-peritoneum, liver and spinal column. Bladder showed marked fibrosis of the wall and thickening of the mucous membrane. The vesico-urethal orifice showed a rounded tumor projecting into the bladder, and on the opposite side some enlargement of the prostate beneath the trigone. The rounded tumor was smooth and of a pearly-white color, with a smooth thin capsule. Section showed it to be a leiomyoma composed entirely of smooth muscle fibres without any glandular elements which were found in the other portion of the enlarged gland.

Hinnman and Sullivan[6], 1931. These authors report on two cases. Number 6 was a patient 36 years old who, two years prior to admission, was told that he had a large median lobe prostate. Some months later he began to suffer with sharp pains in the rectum and a desire to defecate. This was more marked at night. There was some aching discomfort in the perineum during the day, but practically no urinary symptoms. Urological examination was practically negative. By rectum a rounded tumor mass was found which at first felt more like a rectal tumor, but the rectal wall was freely movable over it. Recto-urethral palpation showed the mass to be a part of the prostate. Perineal prostatectomy was performed and a mass removed. Section revealed it to be composed of smooth muscle fibres with no epithelial elements. Diagnosis of leiomyoma was made. Case number 7 was a patient 39 years of age. Symptoms began six months prior to admission, and were all rectal. There was constipation, burning and tenderness which was aggravated by defecation. Rectal examination revealed a large smooth tumor mass the size of a baseball. There was no hardness of malignancy. A perineal prostatectomy was performed and two-thirds of the tumor removed. Patient went into shock and died the next day. Microscopic examination of the specimen showed it to be composed of smooth muscle fibres.

Duitche[7], 1932. Patient, 65 years of age, with no urinary symptoms and only a few centimeters residual urine. All of his symptoms were referable to the rectum. For two months had difficulty in passing stools and a marked desire to defecate which was only successful after cathartics and much straining. Rectal examination revealed a large, firm, hardly movable lobular tumor which compressed the rectum just above the internal sphincter. By perineal approach a mass the size of a man's fist was removed. This consisted of multiple globular masses, gray-white in color and sections showed it to be composed of interlacing smooth muscle fibres supported by scanty connective tissue.

Dial and Halpert[8], 1932. Report three cases, two of which were reported by Dr. Skinner and one by Dr. Carpenter. The ninth case was a man 59 years of age with symptoms of frequency, burning and pain on urination of four years' duration. One month before admission the patient became aware of suprapubic fullness, hesitancy of urination, dribbling, incontinency and inability to empty bladder. One thousand c.c. residual urine found. Prostatectomy was performed and a three lobed prostate was removed. In this mass was one nodule which measured 2 cm. in diameter, globular in shape and firmer than the others. It was pearly-white in color and when cut was whorled in appearance. Section showed a fibrous connective tissue capsule covering it, and smooth muscle fibres which were interlacing and supported by a delicate network of connective tissue. The tenth case was a man 65 years old with symptoms of hesitancy, frequency, dribbling, burning and occasional incontinency. History of symptoms was of thirty years' duration but markedly increased in the last two years. Perineal prostatectomy was performed and six pieces of prostate removed. A smooth rounded nodule 12 mm. in diameter was attached to one of the pieces. This was firmer than the rest of the specimen. Section showed it to be composed of smooth muscle fibres with connective tissue stroma. The eleventh case was a man 67 years of age, with symptoms of urinary difficulty of four years' duration, and symptoms more marked during the last year. Residual urine 250 c.c. Suprapubic prostatectomy was done and a tri-lobed prostate removed. The middle lobe was symmetrical, spherical in shape and firmer than the rest of the specimen. It was 2 cm. in diameter and encapsulated, pearly-gray in color. Section showed it to be composed of a fibrous capsule containing whorls of smooth muscle bundles supported by a delicate connective tissue. No glandular tissue present.

Mitchell and Blaisdell[9], 1933. Patient 62 years old with prostatic obstructive symptoms. Rectal and cystoscopic examination revealed a unilateral lobe enlargement of the gland. Suprapubic prostatectomy was performed. A smooth, soft homogenous tumor the size of a golf ball was removed. Section showed a complete absence of glandular tissue, and only smooth muscle fibres present.

In the twelve cases reported nine presented urinary symptoms and three presented rectal symptoms. In some of the cases which presented the urinary symptoms there was associated with the leiomyomas a true hypertrophy of the prostate gland. In some, even though they were associated with the hypertrophy of the gland, one is led to believe that the leiomyoma was the main obstructing factor. In none of the cases reported were there two distinct leiomyomas, occupying the lateral lobe positions, as was found in the case being reported. No prostate was removed in this case, yet postoperatively the patient emptied his bladder completely and by rectum the prostate was about normal in size, shape and consistency. Therefore, it is evident that the obstructing factor in this case was the leiomyomas springing from the lateral lobes of the prostate.

REFERENCES

1. Lebec: Progress. med., 4:470, 1876.
2. Damski: Ztschr. f. Urol., Chir., 16:47, 1924.
3. Bugbee: J. Urol., 16:67, 1926.
4. Rubritius: Ztschr. f. Urol. Chir., 24:418, 1925.
5. Wolman: J. f. Urol., 25:93, 1929.
6. Hinnman and Sullivan: J. Urol., 26:475, Sept. 1931.
7. Duitche: Ztschr. f. Urol. Chir., 236:475, 1932.
8. Dial and Halpert: Arch. f. Path., 16:332, 1932.
9. Mitchell and Blaisdell: Brit. J. Urol., 5:381, 1933.

Quart Cumulative Index. Medicus, 1934; No case reported.

DISCUSSION

Dr. Max M. Green (New Orleans): I enjoyed Dr. Pratt's very interesting paper. Its interest lies largely in the fact that this condition runs a course very similar to that of hypertrophy of the prostate, and also in that it is a very rare condition. I checked over the records at Charity Hospital here, and was unable to find a single case of leiomyoma of the prostate. I found any number of the common ordinary fibroid of the uterus, one of the intestine, one of the breast and one of the scrotum.

I was fortunate enough to assist Dr. Pratt in this case and it is the only case I have ever seen. Before operation we thought we were dealing with ordinary hypertrophy of the prostate. When the gland was enucleated we noticed that it peeled out very cleanly, giving the impression of a definitely outlined lobule. Neither of us at the time, of course, thought of a leiomyoma.

Most of these cases come to operation diagnosed as a hypertrophy of the prostate, and so far as I know there is no definite way of telling this condition beforehand.

Dr. G. H. Hauser (New Orleans): Dr. Pratt is to be congratulated on the manner in which he has presented this case and on the exhaustive manner in which he has covered the literature.

The morning following the operation on this patient Dr. Pratt remarked that he had operated a very interesting case and had had a pleasant surprise during the operation. His was a very fat patient and he had expected to have some difficulty in removing the hypertrophied prostate. However, to his surprise, when he began the manipulation, the tumors (for there were many) were easily seen from the bed, and he said they looked like fibroids. His suspicion was confirmed a few days later when, microscopically, I found them to be typical leiomyomas.

Leiomyomas, of course, are very common in females, but are less frequently met in males. The reason for their being common in females is that they are the most common neoplasm of the uterus. Occasionally, however, leiomyomas are found in other locations besides the prostate in the male, for instance, in the scrotum, in the kidneys, along the intestinal tract, occasionally in the stomach, in fact anywhere where there is found smooth muscle. In the prostate they are certainly not common for in the years in which I have examined many surgical tissues at Charity Hospital, at Mercy Hospital and elsewhere, this is the first leiomyoma of the prostate that I have seen or heard of in New Orleans.

These tumors vary in size considerably. They may be very small—about the size of a split pea, and again they have been reported up to 140 pounds. Some of the older surgeons tell me that in some negro patients afflicted with leiomyomas of the uterus, the tumor was almost as large as the patient.

These tumors grow very slowly, and are well defined and well encapsulated, and consist of masses of unstriped muscle cells. Because of their poor blood supply and slow growth, they are very susceptible to degeneration. Occasionally hemorrhages occur and on this account the tumors sometime appear greenish black in color. Sometimes we find them completely calcified. They are, as a rule, benign but occasionally one will assume a malignant type and metastasize in the lungs and elsewhere.

Dr. Pratt has shown us by his case that leiomyoma of the prostate must be thought of, in spite of its rarity, but we must be careful not to confuse the lobulated hypertrophy of the prostate, which is so commonly seen, with tumors of this type which are so rare. Sometimes it is only the microscope that can tell the difference.

Dr. M. H. Foster (Alexandria): We have just listened to the presentation of a medical oddity by one of the artists and worthy men in Louisiana urology. In addition to the literary and historic interest of this most rare condition he repored, I feel that we may learn two lessons in

regard to the topic under discussion. One is that we are becoming more tissue-conscious, and more scientifically critical, about just precisely what we are doing at the operating table, and, second, when we state that we have done a prostatecomy, we know that we have not removed the prostate gland wholly, but we have simply enucleated the offending nodule.

I believe, with my friend Henry Van Deusen of Dallas, that the prostate does not possess an intimate integrated capsule of its own, but that when the nodule begins to hypertrophy within the prostate gland tissue, we may have a very well-defined capsule of this hypertrophied nodule, that we may find very well when going through. I have been struck by this fact because in the case of at least one patient from whom I removed this condition from the prostate a number of years ago, I have subsequently treated him for a gonorrheal condition with pus in the prostate.

Dr. John G. Pratt (closing): My object in presenting this case is to get it in the records, for it is a very rare condition. I do not believe it will help us at all in making preoperative diagnoses of such conditions. The case has all the symptoms of prostatism, and I know that if I were to see another such case tomorrow, I could make no diagnosis other than hypertrophy of the prostate, and be surprised to remove a leiomyoma.

CAISSONS DISEASE*

(Compressed Air Disease: Diver's Paralysis.)

LIONEL J. BIENVENU, M. D.,
OPELOUSAS, LA.

It was not long after compressed air began to be used that it was noticed that exposure to increased air pressure resulted in innumerable symptoms which varied from a slight weakness to complete paralysis. The first account of these symptoms was given by Pol and Wattelle in 1841.

Compressed air is used in the sinking of caissons in the construction of immense bridges over deep rivers. In the past three years, this disease has become quite evident in this State due to the great number of bridges being built which require intact foundations. Often it is necessary to excavate to a depth of from 200 to 300 feet below the bed of a river before a proper stratum can be had for a good foundation. It is then evident that in such depths the variations in barometric pressures become immense and were it not for the compressed air to equalize this pressure, such construction work would be almost impossible.

We live in an atmosphere of 15 pounds pressure to the square inch and it has been shown that a descent of 30 feet will increase the pressure 15 pounds to the square inch. If there were no increase in pressure from the air supply to counterbalance this added pressure, the body would be collapsed: hence the necessity of working under compressed air below the surface of the earth.

THE PNEUMATIC CAISSON

The primary purpose of the pneumatic caisson is to enable an excavation to be made in the dry, through water and water bearing soils, either to rock or some suitable stratum capable of sustaining the load designed to be carried. A caisson consists of an air-tight chamber which is open at the bottom in order to permit the soil within the periphery to be excavated. Entrance into this chamber is made through one or more shafts which start at the roof of the working chamber (or deck) and are carried vertically to the top of the caisson. These shafts serve a two-fold purpose, they are used for the sandhogs (men who work under pressure in the working chamber) to climb to the bottom and to hoist out the material that is being excavated. At the top of the shafts are placed "air locks" which consist of a steel chamber fitted with a top and a bottom door. The lock is the device which permits one to enter or leave the working chamber without affecting the pressure being maintained in the working chamber and the shafts. For example, if you wish to enter the working chamber, the bottom door of the lock is closed and the air pressure inside the lock is reduced by opening a valve inside the lock and permitting the compressed air to escape into the open. When the pressure inside the lock is reduced to the atmospheric pressure, it is then possible to open the top door of the lock. One then enters the lock and the top door is closed and air from the shaft is allowed to enter the lock. When the air inside the lock is the same pressure as the pressure in the shaft and working chamber, the bottom door can be opened and one can

*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

then descend a ladder into the working chamber. The reverse process is used to leave the working chamber.

COMPRESSED AIR IN CONNECTION WITH CAISSON

Physics teaches us that water weighs approximately 62.4 lb. per cubic foot, and the pressure per foot as you go below the surface of the water is figured by multiplying the depth in feet by the weight of a cubic foot of water. Therefore, in order to keep the bottom of the working chamber dry, it is absolutely necessary to maintain an air pressure (in excess of the atmospheric pressure) equivalent to the pressure of the water at the cutting edge of the caisson, which is the lowest point of the caisson. It is evident why men have to work under compressed air, and it also becomes evident, from this description of compressed air work, that the physical conditions to which all compressed air workers (sandhogs) are subjected are fundamentally the same, and they differ from work at ordinary atmospheric pressure conditions only because of the increase in barometric pressure.

The ordinary air inhaled consists of a mixture of 79 per cent nitrogen, 20 per cent oxygen and .04 per cent carbon dioxide. Unless the air mixture is kept in these proportions, trouble will necessarily follow. The volume of air which must be furnished each individual is the same, measured at that pressure, so that at no time will the tension of carbon dioxide be greater than at atmospheric pressure.

ETIOLOGY AND PATHOLOGY

Cases are chiefly met with in workers in caissons, tunnels, and mines, and in divers. It must be remembered that the higher the pressure and the shorter the period of decompression, the greater the risk. In caissons, the pressure used often reaches 30 to 35 pounds per square inch, rarely 45 to 50 pounds. To Bucquoy and Paul Bert we owe a rational explanation of caissons disease. During compression the blood passing through the lungs becomes saturated with nitrogen, which is carried to the tissues until the whole body becomes saturated with nitrogen. The mass of blood is about 3 per cent of the body, and the capacity of the tissues to dissolve nitrogen is estimated by Boycott as 35 times that of the blood. In a fat man this is considerably more. With active work it does not take long to effect complete saturation. During decompression the process is just the reverse. We are told that the blood gives up nitrogen to the alveolar air and returns to the tissues for more. The organs in which the circulation is rapid will yield up their nitrogen quickly and those with a sluggish circulation slowly, and at the end of decompression a condition may be set up in which the slow tissues still hold say, 3 per cent of the nitrogen quickly and those with a sluggish circulation slowly, and at the end of decompression a condition may be set up in which the slow tissues still hold say, 3 per cent of the nitrogen, while the blood can dissolve only 1 per cent. Herein is the danger of bubble formation resulting in emboli. The nitrogen in the body fluids begins to dissolve out as soon as the pressure is lowered. This is only harmful if the nitrogen separates in the form of bubbles; these may form in the blood, in the synovial fluid of the joints and in the nervous system. It has been shown that a very rapid reduction in pressure must occur before the formation of bubbles follows. It has been shown by experimenting in goats that all symptoms can be produced and the spinal cord may contain numerous air emboli.

This was the anatomical lesion determined by Leyden who found fissuring and laceration of the cord, which explains the paraplegia. Pulmonary air embolism also occurs and is responsible for certain features.

SYMPTOMS

These usually occur from one half to one hour after the men have left the decompression chamber. I do not know of any disease in which the symptoms vary as much as in caissons disease. In looking over the literature on the subject Keays' classification is the most complete. It will be impossible to give the sub-classes. Keays divides the group into 8 classes:

1. Cases showing pain in various parts of the body, this is called "bends" by the sandhogs. This is the most common.

2. Cases showing pain with local manifestations.

3. Cases showing pain with prostration.

4. Cases showing symptoms referable to the central nervous system, i.e. hemiplegia and the spinal cord disturbances of sensation or of movement or a combination of sensory and motor disturbances.

5. Cases showing vertigo, "staggers" in the common parlance of the sandhog.

6. Cases showing difficult breathing and a sense of tightness in the chest. The sandhogs call this symptom the "chokes".

7. Cases showing partial or complete unconsciousness, with collapse.

8. Fatal cases, with symptoms belonging to groups 3 and 6, symptoms belonging to groups 4 and 5 or even to symptoms belonging to groups 7 and 9.

We are able to judge then the wide range of symptoms which may be included under the general title of caissons disease. The most common symptoms are headache, giddiness and a faint feeling, symptoms which may pass off and leave no further trouble. Other instances may consist of severe pains in the extremities, usually the legs and the abdomen, sometimes associated with nausea and vomiting. The pains may be of great intensity. The paralysis, usually of the legs, comes on rapidly and varies in degree from a slight paralysis to a complete loss of both motion and sensation. In the extremes, the attacks resemble apoplexy; the patient rapidly becomes comatose and death occurs in a few hours. The paraplegia may be permanent, but in slight cases it gradually disappears and recovery is complete. Late resulting features are spinal cord changes, chronic arthritis and deafness. In other words, wherever an air embolism may lodge we shall find a symptom of the affected part which may mean any part of the human body. A typical case may be given as follows:

A patient very well developed, aged 30 years, had worked for several months under pressure. After working from 8 to 11 a. m. and from 2 to 5 p. m. under 35 pounds, he went home. About one hour later he began to have a tightness of the chest with an almost constant cough. I saw this man about two hours later and I found him with severe pain, especially in the abdomen and legs. He was pale, sweating was profuse. The pulse was rapid and not of a good volume. There was a peculiar mottling of the skin which was passive and when an attempt was made to raise this man on his feet he wabbled and fell. He was immediately put on a stretcher and brought to the compression tank a few blocks from his home, where he was recompressed. For some time there was no improvement and about one hour after recompression began his color became better and the pulse much improved with a cessation of pain in the abdomen. After sitting up he complained that he felt very weak but the mottling completely disappeared after three hours in the medical lock. He was returned home and watched closely for the next 24 hours. He returned to work in four days apparently well.

TREATMENT

The most effective means is first, recompression. All other methods are purely theoretical in their virtues. Even morphine at times does not seem to relieve pain as much as in ordinary conditions. Of course the application of heat, massage, strychnine, oxygen and warm drinks are always given. In three cases I have seen with motor disturbances and involuntary actions of the bladder and rectum, spinal puncture was done every three days and improvement was steadily manifest. This of course followed recompression and the patients were in the hospital. It was strange to note that the pressure of the spinal fluid in each case was increased but no blood was noted in the fluid. These patients remained in the hospital an average of 36 days. Following spinal taps, heat, in the form of infra-red applications, was applied three times daily followed with a 20 minute round of massage. Emory of New York recommends the injection of ergot during the time spinal punctures are being given.

PROPHYLAXIS

Early in the twentieth century, as caisson workers became more and more general and compensation insurance gradually became law in most of the States, a great deal of study and research was made as to the cause and effect of the disease and the relationship between the hours worked under various pressures and time taken to come from various pressures into the atmospheric pressure. Tables of these relationships were made and in general the following table is an average of what the various States and authorities have established as being a compromise between the employers and the authorities having jurisdiction over such matters.

Pressure above atmospheric.	Hours worked	Time required to lock out
5 to 18 lb.	8 hours (30 min. for lunch)	5—10 min.
18 to 25 lb.	6 hrs. 3 hrs. on 3 hrs. off	10—15 min.
25 to 32 lb.	4 hrs. 2 hrs. on 2 hrs. off	15—20 min.
32 to 38 lb.	3 hrs. 1½ hrs. on 6 hrs. off	20—25 min.
38 to 43 lb.	2 hrs. 1 hr. on 6 off	25—30 min.
43 to 48 lb.	1½ hrs. ¾ hrs. on 6 hrs. off	35—40 min.
48 to 50 lb.	1 hr. ½ hr. on 6 hrs. off	40 min.

In locking out it has been found that during the first 5 minutes the pressure can be reduced about 50 per cent and that the balance of the time can be used to reduce the other 50 per cent. Men will reduce the locking-out time if not carefully watched, as they usually are uncomfortably crowded and are chilled from being wet and never seem to appreciate the danger of locking out too fast. Immediately, when the men come out of the lock, they should be furnished with strong hot coffee and then made to take a hot bath and put on warm clothing. The clothes they have been working in should be hung up and dried so that the clothes will be dry when they have to go into the caisson again. They should be required to remain near the medical lock for at least one hour after coming out as most cases of "bends" develop within that time, and if they do develop any symptom, they can be immediately put back under pressure and wrapped in warm blankets and massaged while the pressure is very gradually reduced from the pressure under which they have been working.

General requirements for men working under air pressure are that they should have a strong constitution and a good heart and lungs. They should get 8 hours of sleep in 24 hours. They should not use alcoholic stimulants. They should rest immediately after coming out of pressure. Re-examination of all absent employees should be routine and re-examination should be made after three months.

The pseudotype of caissons disease is most interesting. Due to the Workmans Compensation Laws and the high wages which the sandhogs receive in their hazardous work, most States compensate an injured employee from 60 to 65 per cent of his actual wages. The sandhog type of laborer is worldly wise. Their work brings them over every State in the Union and often in many foreign countries. Hence, they become very well educated and I dare say that no man has been in this line of work longer than a few years before he develops a thorough knowledge of the various compensation acts in each and every State within which he works. Seldom will one find a real sandhog who cannot give a thorough description of the "bends".

CASE REPORTS

I have two cases in mind that necessitated long hospitalization before a positive diagnosis could be made. It is a very difficult matter to rule out caissons disease when a man is brought to the hospital in an apparent typical seizure.

Case 1. A negro male, aged 42 years, well developed, was brought into the hospital with a complete paralysis of both legs. He could not even move his toes. It seemed that three days previous, one hour and a half after leaving the air-lock, he developed severe abdominal cramps and soon became so weak in both legs that he could not stand up alone. He was immediately recompressed in the medical lock for three hours. Following this he noted a cessation in the abdominal cramps and could walk a little with assistance. Several hours later, he was again unable to walk unassisted. He was taken back to the medical lock and recompressed for a period of four and a half hours. After this recompression, he was able to return home but the next morning he was not able to get out of bed nor to move his legs at all. Though there was no suffering he could not move his lower limbs and he noticed involuntary movements of the rectum and bladder. He was brought to the hospital where the following was noted. A complete inability to move his lower limbs, the knee reflexes were absent; the pupillary reflexes were sluggish; the blood pressure was 165 systolic and 110 diastolic. The sensory disturbances of the lower limbs were marked. No other pathology was present. A spinal puncture was done, the fluid was under a considerable

pressure but clear. The following day, the blood pressure was 140 systolic and 105 diastolic. Ergot was then begun, 1 c.c. every 4 hours by hypodermic. On the third day he was able to move his toes. On the fourth day another spinal drainage was carried out. On the fifth day the rectum and the bladder functions were normal, with a blood pressure of 140 systolic and 105 diastolic. The sixth day he was able to flex both legs. Gradual improvement in the paralysis was noted and on the fifteenth day another spinal puncture was done and a specimen of the fluid sent to the laboratory from which a report of a plus 4 positive for lues was received. He was able to get around on crutches and returned home. This man was an old head at the game. Though he denied all venereal history I feel that he was aware of the actual trouble and when he found himself unable to move his legs he may have decided to have severe abdominal cramps because of his familiarity with the "bends".

Case 2. Another case worthy of mention was that of a white male, aged 28 years. He left the air lock at 5 p. m., took a hot bath and put on fresh, dry clothes, ate supper and one hour later experienced severe abdominal pain. He was immediately recompressed and after leaving the medical lock was able to return home. He remained at home for two hours when he again began to have severe abdominal cramps. Morphine grs. ½ was administered with no relief, so he was returned to the medical lock and again recompressed over a period of three hours. Following this, he admitted that he was relieved of the abdominal pains but felt very weak. He returned home but at 5 a. m. the next morning he complained of excruciating pain in the abdomen and inability to walk or to urinate. He was catheterized and given ½ gr. morphine. Slight relief was noted from the morphine. In the course of an hour he vomited a small amount of blood. He was brought to the hospital about 10 a. m. The physical examination was negative except for a pulse rate of 100, respiration of 26 per minute. The inability to move his legs was marked with some sensory disturbances of the lower limbs. Ergot was given every 4 hours by needle, also hot packs and massage. This man appeared to be a tough one and exceedingly wise, so we immediately became suspicious of him. He was told that night that the next morning spinal drainage would be made if he did not appear better. At 8 p. m. on the day of entering the hospital he complained so much with inability to pass his urine that he was again catheterized. Lo and behold, the next morning he did feel better and he could move his legs a little and did not complain of any pain. Three days later he again complained of abdominal pain for which morphine was given and relief was noted. That afternoon he vomited a small amount of blood. Careful examination of the nose, mouth, throat did not reveal the cause of the bleeding. The patient had a chronic bronchitis but the blood was not frothy. Roentgenogram of the chest was negative and the sputum also was negative for acid-fast organisms. After the bleeding this man would appear better and do nicely, but every three days, periodically, he produced the hemorrhages. All other symptoms cleared except for a weakness of the lower limbs. He remained in the hospital four weeks during which time he was up and down in a rolling chair, except on the days of hemorrhages. It was decided by the Insurance Company to offer him a compromise which he accepted. It was discovered that he was the owner of the gambling interest at the job. He had two men working for him and every day brought him the winnings at the hospital. After receiving the compromise from the Insurance Company we asked him to tell us where the blood came from assuring him that his answer would have no bearing on his case. He gave us the "laugh" and refused to say. Three months later he was in the penitentiary in Washington State. His record showed that he was dishonorably discharged from the army for murder and he had been in jail on two previous occasions in different States.

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NEW OFFICERS OF THE LOUISIANA STATE MEDICAL SOCIETY

Dr. Hiram W. Kostmayer took office as president of the State Medical Society at the recent meeting in Lake Charles. Dr. Kostmayer, Dean of the Graduate School of Medicine and Professor of Gynecology at Tulane, will make undoubtedly one of the outstanding presidents the Society has ever had. To succeed Dr. Kostmayer, Dr. C. M. Horton of Franklin was made president-elect. Dr. Horton, as Chairman of the House of Delegates, is well known to the men who have attended the State Society meetings in years passed. A man of charming personality with a splendid reputation in his chosen field he will undoubtedly make a president who will maintain the high standards set by his predecessors. As first vice-president Dr. R. C. Young of Covington was chosen by the House of Delegates. Dr. Young is one of the younger men in the profession in Louisiana and has been always active in the affairs of the St. Tammany Parish Medical Society and the State Association. Dr. A. W. Martin, of Bogalusa, will become second vice-president, an honor deservedly bestowed upon one of the loyal members of organized medicine in the state. The same may be said about Dr. Guy Shaw of Loreauville who was made third vice-president, a real honor to an honorable gentleman.

As secretary-treasurer, our efficient present office holder, Dr. P. T. Talbot, again was deemed a most efficient executive, valued for the work he has done in the past years in the active management of the affairs of the office. Dr. P. King Rand of Alexandria became Chairman of the House of Delegates. A man of force and dignity, Dr. Rand will make an excellent presiding officer and if by chance something prevents him from attending the regular meeting, to take his place there will be Dr. Val H. Fuchs of New Orleans who was made Vice-Chairman of the House of Delegates. In his hands also the Delegates can feel assured that they will receive fair and just treatment. The Councilors for the next two years were re-elected in the First, Second, Fourth and Fifth Districts. Dr. H. E. Bernadas, Dr. D. N. Silverman, Dr. M. D. Hargrove and Dr. J. B. Vaughan, respectively, have served for the most part for many years efficiently and self-sacrificingly; theirs is a well merited re-election. From the Sixth District Dr. R. G. McMahon from Baton Rouge was elected to fill the vacancy left by the resignation of Dr. C. A. Lorio. He should make an excellent choice.

To all these new officers the journal offers its congratulations and best wishes.

AMERICAN MEDICAL ASSOCIATION

The recent meeting of the American Medical Association at Kansas City was truly a magnificent convocation of medical men. At this meeting were read papers prepared by the leaders in the profession and the men who are doing the outstanding work in this country. There was a scientific exhibit which was so comprehensive and so complete that literally a man could spend several days studying the various exhibits, in fact it would be almost necessary to spend that length of time in order to acquaint oneself fully with these things which were being shown. The commercial exhibit was splendid and was really quite instructive. In addition to all these features there was the opportunity not stressed in the program of seeing medical friends from all over the country. The social side of the gathering was not neglected.

When one considers what the American Medical Association has to offer to the physicians in this country it is a wonder that every eligible practitioner does not belong to the organization. He may not be able to attend the meetings for various reasons from year to year but at least the opportunity of going to this gathering when the opportunity presents itself should be accepted by every qualified practitioner.

PROTAMINE INSULIN

It might seem advisable to call the attention of the profession to a new insulin preparation which, while not yet on the market, will certainly appear in a comparatively short time. The drug, a protamine preparation of insulin, has been in use now in most of the large clinics throughout the country for some months and has stood the test of practice. This preparation of insulin has the very decided advantage of being prolonged in its action. The insulin of today, strange to say, in some respects is inferior to the older preparation. Modern insulin has been so refined and so concentrated that its effect at times literally is explosive. The immediate effect is prompt and vigorous but it passes off rapidly and there is no longer left any of the insulin which can assist in metabolizing carbohydrate. This is of decided disadvantage, more particularly in youth and in those individuals whose blood sugar is delayed in rising after ingestion of carbohydrate. The new insulin has a mild but continuous effect. The diabetic patient in the future may, in most instances, get along satisfactorily with the old insulin but for certain individuals it is more often likely that the insulin they take will have to be tailor-made, a combination of the old insulin and the new insulin protamine, properly adjusted to their individual requirements.

DEATHS IN THE PROFESSION

It is our sad duty again to be compelled to record the death of two leaders of the medical profession in New Orleans, Dr. Foster Matthew Johns and Dr. Jacob Warren Newman.

Dr. Johns passed away suddenly in the full bloom of his medical career. An always active and busy practitioner of his specialty, Dr. Johns found time to give hours to various duties that had to do with the Orleans Parish Medical Society and the Louisiana State Medical Society. His industry was not only in the routine work that he was required to do but he gave unstintingly and unselfishly to others. Much of his time was devoted to activities that were in no sense remunerative. Big hearted and lovable, he enjoyed the friendship and the admiration of his New Orleans associates probably as much as any other man in the city. Dr. Johns' demise is a real tragedy and a loss not only to his devoted family but also to his innumerable friends.

Dr. Jacob Newman in late years, on account of ill health, had more or less withdrawn from medical activities, nevertheless he was an outstanding man in his public spirited contributions to the health and welfare of a large number of the indigent peoples of the city of New Orleans, more particularly the children. Through his generosity and his interest in the problems of early childhood he accomplished much in the city.

HOSPITAL STAFF TRANSACTIONS AND CLINICAL MEETINGS

SHREVEPORT MEDICAL SOCIETY

The regular meeting of the Shreveport Medical Society was called to order by the President on May 5, 1936, with 38 members and 3 guests present. The minutes of the previous meeting were read and adopted. Before proceeding with the regular business, Major E. R. Wiles, in charge of arrangements for the coming Confederate Veterans Reunion, spoke briefly, requesting the aid of the doctors in running first aid stations in various parts of the town. Dr. J. A. Hendrick introduced a motion to the effect that the Shreveport Medical Society cooperate fully with the Chairman of the Medical Committee, and that he select his own assistants from the membership of the Society. The motion was duly seconded and carried.

Treasurer's Report: The Treasurer reported 120 members with 1936 dues paid and only 11 unpaid. He reported a balance on hand of $1,238.08.

Committee Reports: Committees on the applications for membership of Drs. Pipes and Pardue reported favorably.

Dr. Lucas, Chairman of the Entertainment Committee, requested any suggestions for the entertainment to be given in August.

Dr. J. A. Hendrick, Delegate from the Shreveport Medical Society to the Society for Crippled Children, spoke of the work this Committee is doing, and Dr. Webb requested the doctors' cooperation in compiling a list of all under 18 years of age who have had poliomyelitis.

Dr. Young, Chairman of the Publicity and Public Relations Committee, stated that the annual diphtheria immunization campaign had been set for May 11 to 23.

This being the annual "Business Meeting", the subject of the Mechanics and Ethics of Consultation was presented by Dr. J. E. Knighton, Sr. He outlined the various phases of ethics under three headings: First, the duty of the physician to the patient; secondly, the duties of the physician to each other and the profession at large; third, the duties of the profession to the public. The question of ethics and consultation was thoroughly discussed by a number of members of the Society.

Unfinished Business: Dr. Harwell thanked the Society for their support in his recent difficulty with the Louisiana State Medical Society's Medical Defense Committee.

Dr. Tooke nominated Dr. L. T. Baker for a three-year term on the Shreveport-Caddo Parish Medical Unit. Dr. Hendrick seconded the nomination and Dr. Baker was unanimously elected.

The regular rules were suspended and Drs. C. H. Pardue and D. M. Pipes were elected to membership. The oath was administered to Dr. Pipes by the President, Dr. Pardue being absent.

New Business: Applications for membership were received from Drs. N. Judson Bender and D. B. Daniel. The Society ordered that these petitions take the usual course.

Dr. Mays, Chairman of the Maternal and Infant Mortality Committee, introduced the following resolution: "That the Shreveport Medical Society approve the organization of a Maternal Center under the direct control of the Society." Dr. J. M. Gorton moved that this resolution be studied by the Executive Committee and a report be rendered at the next meeting. This motion duly seconded and carried.

Dr. Crebbin, one of the delegates to the State Society meeting, gave a brief report.

Paul D. Abramson, M. D., Sec.

SCHUMPERT SANITARIUM

After dinner served in the hospital dining room, the staff meeting was called to order on April 14, 1936, by Dr. Geo. Garrett, President, with 19 members and 2 visitors present. The latter were introduced.

The minutes of the last two meetings were read and adopted.

Committee Reports: Dr. Atkins' committee reported favorably on the application of Dr. Youman for membership. He was unanimously elected.

Scientific Program: Dr. J. D. Youman presented an interesting discussion of vaginal ureteral lithotomy, presenting this as an easier approach in the properly chosen cases. Two cases were discussed in which this method for removal of stones was used.

This presentation was discussed by Dr. Stamper, who pointed out some of the difficulties to be avoided, and by Dr. Winder.

Dr. S. W. Boyce gave a case report concerning a white female, age 37 years, who developed Meniere's syndrome, apparently due to hemorrhage into the labyrinth. This report was discussed by Major Kinnard, Captain Corliss and Dr. Edwards.

The deaths for the past month were discussed.

Dr. George Garrett announced the Nurses' Graduation Exercises for May 5.

C. H. Webb, M. D., Sec.-Treas.

NORTH LOUISIANA SANITARIUM

The North Louisiana Sanitarium Staff meeting was called to order on April 30, 1936, by the President with 21 members present. After the disposal of routine business, attention was turned to the scientific program.

Dr. J. M. Gorton reported a case of influenza, presenting multiple complications and expiring with a pleural and pericardial effusion and paralytic ileus. The case was discussed by Drs. Rigby, Cassity and Gowen.

Dr. M. D. Hargrove reported an interesting case of myxedema that had been previously diagnosed

as chronic nephritis and heart disease. Under thyroid therapy, the patient made rapid and gratifying progress with relief of distressing symptoms.

H. M. Trifon, M. D., Sec.

TRI-STATE HOSPITAL

The meeting was called to order on April 23, 1936, by Dr. J. C. Willis, Sr., Chairman, with 20 members present.

Following disposal of routine business the scientific program was opened by Dr. W. B. Allums. He presented the case of a white male adult whose history revealed fever, malaise and mild pain in the right renal area for a period of four weeks. Physical examination elicited no findings of note except slight tenderness over the painful area. There was leukocytosis but no pyuria. The clue to the diagnosis was the presence of a furuncle on the neck eight weeks before hospitalization, suggesting the probability of a carbuncle on the kidney. Roentgenographic studies substantiated this, and at operation the abscess was drained. Recovery was uneventful.

The second case was presented by Dr. J. E. Knighton, Sr., and also illustrated the value of the history. This male adult complained of weakness and digestive disturbance, with low grade fever for three months. Examination revealed moderate anemia, enlargement and tenderness of the liver with no other findings of particular importance; the heart, lungs and renal system being normal. The leukocyte count was above 30,000, predominately neutrophiles. Stool and proctoscopic examinations were negative. Despite the negative specific findings, and the absence of diarrhea at any time, a diagnosis of amebic hepatitis was made because of the history of eight years spent in the tropics. Specific therapy was instituted and marked improvement was prompt, including subjective symptoms, shrinking of the liver, and return to normal of the blood count.

Following the discussion of the statistical and mortality reports for the preceding month, the meeting adjourned. The next meeting will be held May 28, 1936.

J. E. Knighton, Jr., M. D., Acting Sec.

FRENCH HOSPITAL

A regular meeting of the French Hospital was called to order on May 14, 1936, with Dr. L. J. Menville presiding, in the absence of the Chairman. The minutes of the last meeting were approved as read.

The discussion of deaths was then opened by Dr. Rougelot, who gave a brief account of Mr. G's history, the salient feature of this case being the unusual type of blood count. Dr. Harris explained that it is not unusual for the blood to throw out these atypical cells, which are probably of myelocytic origin, and that often the blood picture resembles that of an acute infectious mononucleosis.

Dr. D. N. Silverman then presented a very interesting paper on "Carcinoma of the Stomach". His paper consisted of five cases with associated achylia-gastrica in their earlier period. They had no lesions demonstrable by roentgen ray, yet these patients all complained of symptoms referable to the stomach and eventually showed full grown carcinoma of the stomach.

Dr. Menville opened the discussion by stating that at the very best roentgenology is only correct 95 per cent of the times for diagnosis of gastric carcinoma and that until some definite means of diagnosing such cases as these is found they will have to go to more advanced stages until a more definite diagnosis can be made.

Drs. Harris and Gordon both discussed the value that gastroscopy would have in the early diagnosis of this type of lesion, concluding that it may be as great a value in this type of work as the cystoscope in bladder work.

MERCY HOSPITAL

The regular monthly meeting of the Mercy Hospital Staff was held on May 6, 1936, with Dr. E. L. Zander presiding in the absence of Dr. George Hauser.

This meeting was made very interesting by the excellent scientific presentation of Dr. J. K. Howles on the "Modern Treatment of Syphilis". The essayist described all the stages of syphilis and discussed the therapeutic agents of choice.

Drs. M. Campagna and E. R. Guidry presented a prenatal obstetrical case, 27 years of age, having hypertension and a pericarditis complicating pregnancy. The presentation of this case was for the purpose of discussing the manner in which the case may be treated.

Lloyd Hanckes, M. D., Sec.

HOTEL DIEU

A joint meeting of the New Orleans Gynecological and Obstetrical Society and Hotel Dieu Staff was held Wednesday, April 22, 1936 at 8:00 p m. in the Nurses' Lecture Room of Hotel Dieu.

The meeting was called to order by the President, Dr. E. H. Walet, and the Secretary, Dr. J. LaNasa, at the desk.

The scientific program consisted of:

a. A Brief Resume of Ten Years of Gynecological Service at the Women's Dispensary —Dr. Etta McCormick.

b. Premature Separation of the Normally Implanted Placenta—Dr. George Mayer. Discussed by Drs. Reddoch, Dixon and Hebert.

c. A DeLee film, "Local Anesthesia in Obstetrics", was presented, courtesy of the Winthrop Chemical Company.

J. T. NIX CLINIC
New Orleans

At a meeting held in May, 1936, Doctor A. E. Fossier read the following paper:

HEPAPTOSIS

Hepaptosis must be defined as a dislocation or a dropping of the liver from its normal position especially when associated with visceroptosis or secondary to a descent of the abdominal organs. The term, hepaptosis, is thereby limited strictly to a ptosis of the liver due to its lack of or diminished support by the underlying visceral organs. All displacements of that organ caused by the bearing down influence of fluid in the thoracic cavity, by an enormously dilated heart, by an hepatic enlargement, or by trauma and shock, do not come under that interpretation.

The dropping of the liver was first discovered on the cadaver by Heister in 1754. In 1836 Ollivier wrote that the liver was frequently observed not to be in its normal position, but was dropped or displaced either totally or partially, and attributed these displacements to a defective conformation of the abdominal parietes. It was not until the year 1892, that Glenard called attention to its association with splanchnoptosis and gave it the name of hepaptosis.

Andresen, in 1911, claimed that hepaptosis was often associated with ptosis of the viscera and deplored the fact that: "All careful observers see many of the so-called floating liver in the course of a year's practice, but the literature, which lately has abounded in articles relating to ptosis of the kidneys, stomach and colon, has been strangely lacking in reports of liver ptosis."

He could very well have made the same remark this day, for only a few cases have since been reported, the greatest majority of these having come from the pen of Italian observers.

Various hypotheses as to the cause of the descent of the liver have been advanced from time to time. Meisner thought that this hepatic dislocation was caused by the lengthening of the suspensory ligament of the liver, forming a peritoneal fold analogous to the one attached to the right hepatic lobe in many animals, which is known as the mesohepar.

Winkler wrote that the stretching of the ligament is passive and secondary; and that the primary cause is the sinking of the intra-abdominal pressure, most probably due to a relaxation of the abdominal walls caused by physical over-exertion, repeated strain on the abdominal walls, and also to a great extent to a rapid emaciation of the patient.

Landau has also expressed a somewhat similar view. He claimed that the so-called ligaments of the liver are insufficient to hold up such a voluminous organ and that the fixation of the liver in its normal position is effected through the pressure of the abdominal muscles on the viscera as well as by the elasticity of the lungs which arch up the diaphragm. He named this condition "twisted, rotated, or torsion liver." He has always observed it in connection with a floating kidney and the descent of the transverse colon.

Coffey has stated that in midline ptosis, which is an acquired visceral prolapse involving one or more of the organs which cross the midline of the abdomen, it is not uncommon to find the liver down.

Keith observed that in visceroptosis the liver is deformed and is more movable than normal, its right lobe being prolapsed into the right loin, under the tenth and eleventh costal cartilage, or the whole of the lower border of both the right and left lobes may be depressed 3.6 to 10 cm. (1 to 4 inches) below the costal margin.

The liver is only fixed posteriorly and is attached to the diaphragm by the mesohepar which is formed by the hepatic veins and the inferior vena cava, connective tissues and a reflection of the peritoneum. The broad or suspensory ligament is a thin membrane which passes interiorly above and below the liver. In its natural position the falciform ligament forms a pocket which, with the diaphragm and the abdominal wall, encloses the convex upper part of the left lobe. Gray states that this ligament has no function of suspension. It is thus evident that the liver is only held by a hinge-like attachment of its posterior surface to the diaphragm by means of the mesohepar. The other ligaments of the liver, round, falciform or suspensory, and the right and left lateral assert only a negative support on that organ. Besides, the visceral surface of the liver rests on a visceral shelf which is formed by the right kidney, the hepatic flexure of the colon, the stomach, the first stage of the duodenum, the gastro-hepatic omentum, the pancreas and the celiac axis.

The supporting tendency of this shelf is diminished by various factors, among which are the relaxation of the abdominal walls, loss of ventral fat and defective postures; essential factors in visceroptosis.

Coffey, in summing up the peritoneal supports of the various organs anatomically, found "That in normal man the liver has actually fused with the diaphragm at its back. The free margin is supported at its middle by that part of the primitive ventral mesogastrium which remains in the form of the falciform ligament."

There is a moderate degree of displacement of the liver in every case of visceroptosis. The relativity between the degree of the hepaptosis and the intensity of the splanchnoptosis is nearly always constant.

Whenever there is a flattening of the convexity of the diaphragm there is a ptosis of the liver. Although the dome of the diaphragm may be de-

pressed by the weight of the fluid in the pleural cavity, a consolidation of the lung, an enlarged heart, and to other factors besides a lessening of the intra-abdominal pressure, it is not difficult to make a differential diagnosis. A wandering liver, that is, when the organ is situated in the lower abdomen and totally ptosed, is recognized without difficulty because it is easily palpated and its size and position readily determined. These cases are comparatively rare, but when the hepaptosis is only partial and the displacement is only very slight, a diagnosis is more difficult to make and demands more skill and experience on the part of the clinician.

The size of the normal liver varies in different individuals. There is no accurate basis or standard by which we can determine the individual normality of that organ. A perusal of our text books is sufficient to confirm this statement. The same thing may be said of the heart and the aorta, for we have no definite determinator by which we can accurately determine their individual normality. The size of these organs varies with the age, sex, size and bodily conformation of the individual[1].

The normal lower liver border extends approximately to the lower margin of the costal arch and considerably beyond the median line even to the left mid-clavicular line. The topographic anatomy of the normal liver varies with the stature of the individual and his skeletal peculiarities, especially of the thorax.

The sthenic and hypersthenic types of man are characterized by a short, wide and deep thorax with a very obtuse intercostal angle. The liver is broad in its horizontal dimensions and narrow in its longitudinal. In the asthenic and hyposthenic types of bodily conformation the thorax is long and narrow and the intercostal angle is very acute. The horizontal dimensions of the liver are narrow and the longitudinal are broad.

In hepaptosis the right vault of the diaphragm is flattened to a considerable degree and the inferior limit of the liver extends below the costal arch and occupies an abnormally low position in the abdominal cavity. Both the superior and inferior areas of hepatic dulness are lowered. The liver assumes a more longitudinal position, its horizontal dimensions are decreased, so much so that frequently the left border is found at or extending but slightly beyond the median line. As the liver loosens its support because of a diminishing intra-abdominal pressure it becomes ptosed by rotating in a forward, downward and right lateral direction.

The size of a normal liver in the right midclavicular line may be established by the following determinant: the upper liver border corresponds with the upper limits of absolute hepatic dulness, the line of attachment of the diaphragm to the thoracic wall. The lower border of the organ extends to, and not beyond, the lower border of the ribs.

Hepaptosis may simulate enlargement of the liver, because the increase in weight of the diseased organ has a tendency to ptose it. In such instances the liver is movable only in its vertical axis; it drops when the patient stands and can be easily replaced in its normal position on lying down. The upper limit of liver dulness is but slightly lowered if at all, and the convex surface is readily palpable.

An important diagnostic point in hepaptosis is the replacement of the liver by gentle upward pressure applied to the right side of the abdomen, and when this pressure is released, the liver will sag in its previous ptotical position.

I have seen many cases in which the hepaptosis was corrected and the liver maintained in its normal position by means of a properly fitted abdominal support, and permanent results achieved by increasing the intra-abdominal pressure by making ventral fat and strengthening the belly muscles.

BIBLIOGRAPHY

1. Fossier, A. E.: Size of the normal heart, J. A. M. A., 82:2016, 1924.

Fossier, A. E.: The thoracic aorta: The determination of its normal size, N. O. Med. and Surg. J., 78:318, 1935.

OSCAR ALLEN TUMOR CLINIC
Charity Hospital
NEW ORLEANS

The Scientific meeting of May was called by Doctor James T. Nix, Director. The essayist was Dr. J. M. Miles, who presented the following paper:

SOME FACTORS INFLUENCING THE ROENTGEN RAY THERAPY OF NEOPLASMS

The application of therapeutic roentgen ray is far from a simple procedure, especially in the treatment of neoplasms. The lack of standardized procedures is the result of increasing information on the subject of cellular pathology and the technical improvements in methods of administration of the roentgen ray which have marked the advance of the science of radiology.

In tumor therapy, more specifically in the case of malignant tumors, one strives, in general, to obtain the maximum irradiation of the tumor cells without destroying the normal cells forming the "tumor bed". In the course of such therapy a complication may arise which seldom occurs in the much "lighter" therapy of non-tumorous conditions.

Keloids furnish a simple example. We find them particularly in the Negro race, often on the neck or face where, because of cosmetic reasons, therapy is desired. Our object is to so af-

fect the proliferating fibrous tissue by the roentgen ray that it ceases to grow and even recedes.

Roentgen ray applications reduce the size of the keloids but, in many cases, produce a depigmentation of the skin over the keloid resulting in a more unsightly lesion than the original. Because of this particular complication more conservative therapy is indicated than would otherwise be the case.

DIFFERENCE IN CELLULAR TYPE

No doubt one of the greatest deterrents to satisfactory irradiation effect is the destructive influence upon the "tumor bed" and overlying normal tissue. The difference in sensitivity of the tumor and the normal tissue surrounding it determines the factor of safety in applying the roentgen ray.

An osteosarcoma cannot be satisfactorily treated because it, as bone, is more resistant than the overlying skin. On the other hand, an enlarged spleen is very satisfactorily treated because, as lymphoid tissue, it is much more radiosensitive than the surrounding structures. A lymphosarcoma in the tonsillar region responds better to irradiation than a spindle cell sarcoma of the same size and location.

INFECTION AND DISEASE

In the presence of infection the resistance of the non-tumorous cells is lowered to such an extent that they may tolerate only half the irradiation they would were the infection first cleared up. The naso-pharynx and the cervix of the uterus are important in this respect. Irradiation that would be tolerated normally, may, in the presence of infection, produce necrosis of the tumor bed without affecting the tumor itself and hasten instead of retard the extension of the growth.

Caution is also necessary in the presence of associated diseases such as syphilis, diabetes, and arteriosclerosis. Nutrition to the part is already impaired and the cells are less able to recuperate from the irradiation.

As an example of impaired nutrition we can consider skin grafts following burns, since it is not uncommon for epitheliomata to arise in such areas. Fortunately in such cases the poor blood supply which lowers the resistance of the engrafted tissue goes hand-in-hand with a poor lymphatic supply and an abundance of fibrous tissue which limit the spread of the carcinoma.

IRRADIATION OF ADJACENT STRUCTURES

The irradiation of neighboring organs cannot be avoided but its effect can be minimized by the use of multiple portals and the avoidance of overlapping of the roentgen ray beams at the site of these organs.

In the treatment of a carcinoma of the cervix, the bladder or rectum may receive excessive irradiation, especially if the beam is directed at an angle toward the cervix in an attempt to concentrate the irradiation at that point. A proctitis may result, from intensive combined radium and roentgen ray therapy, ulceration of the bladder mucosa, vesicovaginal fistulae, and benign strictures of the rectum have been reported.

In other regions of the body there have been reported nephritis following irradiation of the kidneys; Addison's disease, the adrenals; myxedema, the thyroid; perforation of the intestine, the abdomen. None of these have we experienced.

Fibrosis of the lung we have seen following irradiation of the lymphatic area of the breast. Always to be considered is the effect upon the metaphysis in a growing child in which irradiation may produce a retardation in the growth of the bone with shortening.

Irradiation of the ovaries and testicles should, of course, be avoided when possible. Aside from sterilization and menopause there is the possibility that, due to injury to the genes, a monstrosity may be born in present or future generations.

SPECIAL RULES AND GENERAL OBSERVATIONS

Anaplastic cells (embryonic type) are more radiosensitive but also recur more readily than do the more adult or differentiated cells.

Build up patient's general condition prior to therapy.

Clear up infections before irradiation.

Do not forget to make sure that the proper filters are in place before applying a roentgen ray treatment.

Extract badly diseased teeth *before* irradiating the jaw.

Fever occurring during treatment indicates either a latent infection or rapid tumor necrosis with resulting toxicity.

Grading of tumors is essential to proper therapy.

High kilovoltage (short wave-length) and heavy filtration spare the skin and deliver a relatively greater dose into the tumor.

Individualize the treatments.

Judge the result of therapy by the psychological effect upon the patient as well as tumor recession or amelioration of symptoms.

Keep complete records.

Liver extract has to date been our greatest aid in overcoming irradiation sickness.

Multiple portals help to deliver a maximum roentgen ray dose into the tumor.

Nuclear division is the time of greatest sensitivity in the cell.

Over-irradiation destroys the tumor bed.

Prolonged treatment sufficient to allow division of all the cells in the tumor is most likely to be successful.

Question the patient concerning previous irradiation.

Radio resistance is increased by insufficient treatment.

Sensitivity of the tumor is dependent upon many factors including histologic type of cell, grading, location, age of the patient, and previous irradiation.

The effect of irradiation is believed to be due more to the effect upon the tumor bed than to direct action upon the neoplastic cells.

Uniform distribution of roentgen ray is essential for treatment of the lymphatic drainage area.

Very intensive irradiation will aggravate the patient's condition.

Watch closely for complication.

Examine the skin before each treatment.

Young patients have a greater skin sensitivity and need closer observation.

Zenith of success is obtained when not one method but a combination of all or any of the accepted methods of surgery, radium or roentgen ray are used.

THE HUTCHINSON MEMORIAL CLINIC

Scientific Section: Symposium on Amebiasis, conducted by the Department of Tropical Medicine, Col. Charles F. Craig presiding.

Dr. E. C. Faust (Department of Tropical Medicine, Division of Parasitology): Amebiasis is the state of being infected with the protozoan organism, Endamoeba histolytica. There are other parasitic amebae of man which require differentiation from Endamoeba histolytica. In the stool commonly we have three nonpathogenic types to deal with: (1) Endamoeba coli, (2) Endolimax nana, and (3) Iodamoeba butschlii. Unfortunately, we have to make routine fecal examinations in order to differentiate these species from Endamoeba histolytica.

Referring particularly to Endamoeba histolytica, this organism is an obligatory parasite of man. In the human host, as far as it is known, it is always a tissue parasite. These organisms live for the most part in the intestinal tract but by the blood stream and other methods of transfer get into the liver and to a lesser extent in other organs and tissues of the body, propagating in the tissues by binary fission. Approximately 95 per cent of all lesions occur in the large bowel and a very small percentage may be found in the lower segments of the small bowel. The active organism, which has colonized in the tissues of the intestinal wall, is discharged from the lesions and passes down the lumen of the bowel. If putrefaction or fermentation is excessive, it may disintegrate in transit to the anus and not be found in the fecal material that is passed. In unformed stools, or those with a watery, mucus or muco-sanguineous consistency, the amebae are usually discharged in the active, unencysted state and rarely encyst in the passed feces. In formed stools the organisms are uniformly passed in the encysted state. In semiformed stools it may be possible to find trophozoites, precysts and cysts, either separately or at the same time, at the time the stool is passed. In less than an hour encystation of all the amebae will usually have occurred.

Since the cyst alone is infective, trophozoites discharged in cases of amebic dysentery do not constitute a menace to society; on the other hand, "cyst passers" usually free of manifest symptoms, constitute a constant danger.

A cyst ripens by a two-fold division of its nucleus; this four-nucleate cyst is considered to be most infective. It is not only slightly resistent to desiccation or to putrefaction of the medium in which it is found, but will remain viable for many weeks when washed and placed in distilled water. It will usually survive for several days in feces placed in the ice-box. On being swallowed the viable ripe cyst passes through the stomach uninjured. In the intestinal juices a double phenomenon takes place: partly on account of the intestinal juices and partly on account of activation of the protoplasm within, the cell wall disrupts. Each nucleus now divides in two, making a total of eight nuclei from each cyst. These eight nuclei, each surrounded by a small mass of cytoplasm, pass down into the large bowel, and on apposition to the cells of the crypts or to those on the interglandular prominences, they become lodged and by lytic and mechanical means work their way into the mucosa and multiply.

At least 5 per cent of the population of the United States harbors Endamoeba histolytica. In some communities, as in rural Tennessee and certain parts of the State of Virginia, the infection percentage reaches between 25 to 50 per cent. The corrected rate for out patients in the charity population of residents of New Orleans is 13.2 per cent. A conservative estimate indicates that 200,000 persons in the State of Louisiana are infected with Endamoeba histolytica. It is uncommon in infants but increases with age, at least to middle life. While I do not recognize a nonpathogenic race of Endamoeba histolytica, there is now some evidence of intrinsic differences in strain virulence or pathogenicity, and while there appears to be no individual human host resistance to infection, there is probably definite group resistance to clinical manifestations.

Where gross contamination of water by visible cysts occurs, water-borne epidemics may develop, as in the Philippines and Canal Zone before sanitary water systems were installed, and more re-

cently in two hotels and in the stockyards in Chicago, but this cannot account for the widespread distribution of the organism in man. The most plausible explanation is that of food contaminated by: (1) food handlers or (2) flies. Examination of food handlers frequently shows a higher percentage of "carriers" than the average population, and experimentally flies have been found to transfer the cysts of Endamoeba histolytica from feces to food. Yet food, as far as I know, has never been actually incriminated in nature, and the problem of the epidemiology of endemic amebiasis is still unsolved.

Dr. Duval (Department of Pathology): The part that has been assigned to me in this symposium concerns the pathology of amebiasis. I would first like to say that of all the intestinal infections, amebiasis gives rise to lesions that are so striking and characteristic that they are not to be confused with the pathology of any other intestinal tract infection. There is, however, one exception, namely, the lesion of chronic bacillary dysentery. The intestinal ulcers in typhoid fever, tuberculosis and acute bacillary dysentery are readily told by the naked eye from the lesion of amebiasis.

In order to make plain the gross and microscopic changes for the tissues in amebiasis, I will present a number of lantern slides. The lantern slides show both the naked eye and microscopic lesions of amebiasis for the intestinal tract and the liver. As you know, the earliest changes in an intestinal amebiasis occur for the large bowel and at the various flexures. This explains why the earliest lesions are seen in the cecum, hepatic, splenic and sigmoid regions. The earliest gross change is that of a circumscribed hillock or nodule, with the overlying mucous membrane unbroken. Later these mucosal hillocks become ulcerated and still later, these ulcers become quite deep, involving all coats of the bowel. The ulcers early present a characteristic appearance, namely, they are more or less wedge-shaped with the base down in the gut wall. The opening of the ulcer is comparatively small and presents edges that are heaped up and overhanging. The fact that the ulcers are so much more extensive in the submucous tissues of the bowel explains the "honeycombing" of the intestinal wall through the ulcerative communication. A striking feature of the advanced intestinal ulceration in amebiasis is that one may pass a probe down into an ulcer and bring it out through another ulcer, the opening of which is some distance away.

Microscopically, the lesion of intestinal amebiasis is one of necrosis and subacute inflammation, which is characterized by a moderate degree of lymphocytic infiltration. The necrosis seems to be produced through the pressure upon the invaded tissues by the Endamoeba histolytica. In other words, preceding the necrosis there is pressure trophy. Following the necrosis, ulceration occurs with a sloughing out of the necrotic tissue. Subsequently, secondary pyogenic infection occurs for the ulcerative tissues. This explains the presence in the amebic lesion of large numbers of neutrophiles. Later in the process there appears considerable fibrosis which tends to heal the ulcers and, at the same time, produces considerable thickening of the intestinal wall.

Col. Charles F. Craig (Department of Tropical Medicine): As regards the subject of symtomatology of amebiasis it is a rather difficult one to discuss because the symptoms are protean in character. They depend upon the degree of pathology, but for convenience of description the cases may be divided into four clinical classes, i. e. (1) the carrier with no definite symptoms of the infection; (2) the carrier with mild or indefinite symptoms of infection; (3) the patient showing intermittent attacks of mild or severe diarrhea and constipation, and (4) cases showing symptoms of acute, subacute or chronic amebic dysentery. The treatment of these various stages is not the same and for this reason their recognition is important.

Class I. *Carriers without symptoms*: It is unfortunate that in an infection in which from 5 to 10 per cent of the people harbor the organism there are so many who do not show any definite symptoms of the infection. It may be roughly stated that approximately 50 to 60 per cent of infections do not show any definite clinical symptoms. This does not mean, of course, that they may never develop symptoms, but only if examined at one time this proportion of symptomless carriers will usually be found.

Class II. *Carriers who show mild or indefinite symptoms*: This class is a large one and consists of those who present very mild attacks of diarrhea or indefinite symptoms connected with the digestive tract. Such symptoms consist in gaseous eructations, colicky pains in the abdomen, tenderness of various areas of the abdomen, headache and the symptoms usually seen in a mild toxic condition. These symptoms are not peculiar to amebiasis as they occur in many other disease conditions of the intestinal tract but they should always suggest a stool examination because they are frequently caused by Endamoeba histolytica.

Class III. *Patients showing intermittent attacks of mild or severe diarrhea and constipation*: Patients in this class are those who suffer from attacks of diarrhea alternating with constipation or normal bowel movements. They also present the symptoms that are present in Class II and only differ in that they do have more or less severe attacks of diarrhea which last from one or two to several days.

Class IV. *Cases showing symptoms of acute, subacute or chronic amebic dysentery*: It is not necessary for me to discuss these symptoms here as you are all well acquainted with them.

The important point to remember regarding the symptomatology of amebiasis is that definite ulceration may be present in the intestine without any definite symptomatology. Dr. Faust has emphasized the fact that Endamoeba histolytica is a tissue parasite and lives in the tissues of the intestine or elsewhere in the body. Thus there is no such thing, from the standpoint of pathology, as a perfectly healthy carrier of this parasite. Lesions, however small in size, are always present, and in such cases an amebic abscess of the liver may develop, although there have been no symptoms of diarrhea or dysentery.

The recognition of the four symptomatic classes of amebiasis that have been mentioned is most important from the standpoint of treatment. We would not think of treating a carrier with or without symptoms in the same manner as we would treat a case of acute amebic dysentery. Therefore, in considering the treatment we must consider the treatment of each of the classes separately.

For the treatment of carriers with or without symptoms (Class I or Class II) we have three drugs that are very efficient, i.e. chiniofon, vioform and carbarsone. Chiniofon and vioform depend for their efficiency upon their iodine content, while carbarsone depends for its efficiency upon its arsenic content.

Chiniofon is given in the form of tablets or pills each containing 4 grains (0.25 grams) and the dose for a one hundred and fifty pound adult is four pills three times daily. This drug has been used for a period of many years and possesses very little toxicity. The symptoms which are produced by it and which are sometimes thought to be toxic are abdominal colic and diarrhea. The diarrhea, if not excessive, is not harmful in that it carries away a large number of amebae that might not have been destroyed by the drug. In giving the drug it is well to begin with a small dose, as two or three tablets three times daily, and watch the effect as regards the occurrence of diarrhea. For the treatment of carriers with or without symptoms three or four pills should be given three times daily for a period of seven to ten days, preferably eight days for the average adult. In most carriers one course of treatment will rid them of their infection, but if a stool examination at the conclusion of treatment or afterwards shows the amebae the course may be repeated, and it is my experience that most cases will be cured. If not, vioform may be tried or carbarsone may be administered.

Vioform is dispensed in gelatin capsule containing 4 grains (0.25 grams). The dose is one capsule three times daily for ten days, an intermission of one week and one capsule three times daily for another ten days. In some cases that have not responded to chiniofon this treatment is efficient.

If neither chiniofon nor vioform is efficient, carbarsone should be administered, in capsules each containing 4 grains (0.25 grams), the dose being one capsule twice a day for ten days. The course of treatment may be repeated after a week or two if the first course has not been successful.

In the treatment of Class III cases, i. e. those having attacks of diarrhea, emetine hydrochloride should be used to control the diarrhea if it is severe. After the diarrhea has been controlled a course of chiniofon, vioform or carbarsone should be given. The treatment of acute amebic dysentery and of the exacerbations of subacute or chronic amebic dysentery consists in controlling the symptoms with emetine hydrochloride followed by a course or courses of chiniofon, vioform or carbarsone.

In administering emetine hydrochloride the dose is one grain per day administered subcutaneously and no more than 12 grains should be administered during a course of treatment. Usually the symptoms of diarrhea or dysentery are controlled by emetine after the administration of the drug for seven to eight days. This drug is much abused by the medical profession in the treatment of amebiasis. It can not be relied upon to cure the infection, as in my experience over 80 per cent of patients treated with emetine hydrochloride alone show amebae in their stools within one month after completion of the treatment. It is, however, a wonderful drug for controlling the symptoms of diarrhea or dysentery, but after these symptoms have been controlled, emetine should be stopped and one of the other amebicidal drugs should be administered.

I desire to say in concluding my discussion of the treatment of amebiasis that I believe that every individual who has been shown to be infected with this parasite should receive treatment sufficient to rid him of the infection. From my personal experience I am impressed with the necessity of treating these cases because of the considerable number of instances in which amebic abscess of the liver has developed in symptomless carriers and because of the occurrence of acute symptoms of diarrhea or dysentery in people who carried the organism for long periods of time without symptoms. The time to treat infection with Endamoeba histolytica is as soon as the infection is discovered, whether symptoms are present or absent.

As regards the prophylaxis of amebiasis it is the same as that of all diseases caused by the ingestion of contaminated food or drink: filtration of water supplies; the proper screening of food

supplies from flies and other insects, and the examination and treatment of food handlers employed in public eating places or in the home, are the important prophylactic measures that should be insisted upon in otherwise well sanitated districts. It is undoubtedly true that the greatest of all sources of amebiasis is the infected food handler and the discovery and treatment of these people is of prime importance in the prophylaxis of infection.

The practicing physician can do a great deal in preventing amebiasis by being on the look out for symptoms which may be produced by it and properly treating patients whose stools have been examined and found positive for the parasite. It should be remembered that amebiasis is a familial infection, that if one member of the family is found infected it is probable that other members will also be found infected. Therefore it is important to examine the stools of all the members of a family in which one member has been found to be infected with Endamoeba histolytica.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR

JUNE 1 Board of Directors, Orleans Parish Medical Society, 8 p. m.

JUNE 1 Eye, Ear, Nose and Throat Hospital Staff, 8 p. m.

JUNE 3 Clinico-Pathological Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

JUNE 3 Mercy Hospital Staff, 8 p. m.

JUNE 5 Pathological Conference, Hotel Dieu, 11 a. m. to 12 noon.

JUNE 8 ORLEANS PARISH MEDICAL SOCIETY, 8 p. m.

JUNE 9 Charity Hospital Dental Staff, 8 p.m.

JUNE 10 Touro Infirmary Staff, 8 p. m.

JUNE 12 Pathological Conference, Hotel Dieu, 11 a. m. to 12 noon.

JUNE 12 French Hospital Staff, 8 p. m.

JUNE 15 Hotel Dieu Staff, 8 p. m.

JUNE 16 Charity Hospital Medical Staff, 8 p.m.

JUNE 17 Clinico-Pathological Conference Touro Infirmary, 11:15 a. m. to 12:15 p. m.

JUNE 17 Charity Hospital Surgical Staff, 8 p.m.

JUNE 17 1st and 2nd District Dental Society, 8 p. m.

JUNE 18 Eye, Ear, Nose and Throat Club, 8 p. m.

JUNE 19 Pathological Conference, Hotel Dieu, 11 a. m. to 12 Noon.

JUNE 19 I. C. R. R. Hospital Staff, 12 noon.

JUNE 22 ORLEANS PARISH MEDICAL SOCIETY, 8 p. m.

JUNE 23 Baptist Hospital Staff, 8 p. m.

JUNE 24 Clinico-Pathological Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

JUNE 26 Pathological Conference, Hotel Dieu, 11 a. m. to 12 noon.

During the month of May, besides the regular meeting of the Board of Directors, the Society held two regular scientific meetings as follows:

May 11—Acute Appendicitis
(Subject for Longer Life Week)

Dr. Frederick Fenno, President, gave a brief explanation of Longer Life Week.

Report of Longer Life Week Committee for 1936 —Dr. George D. Feldner.

Acute Appendicitis as the Pediatrician Sees It —Dr. John Signorelli.

Acute Appendicitis as the Medical Man Sees It —Dr. Oscar W. Bethea.

The Surgical Aspects of Acute Appendicitis—Dr. Ambrose H. Storck.

The Presentation of Acute Appendicitis in Standard Textbooks and Systems. Dr. Frederick Fitzherbert Boyce, Acting Chairman of the Longer Life Week Committee.

Acute Appendicitis as a Community Health Problem—Dr. C. C. Dauer.

The Mortality of Acute Appendicitis in the Hospitals of New Orleans. (This was the report of the data compiled by the Longer Life Week Committee. The work was done by Dr. Paul B. Cameron and Dr. F. F. Boyce, and the report was read by Dr. Nathan H. Polmer.)

May 25, 1936, the following program was presented:

Postoperative Pulmonary Complications.
By Drs. J. Ross Veal and Benjamin Van Werden.
Discussed by Dr. Edgar Hull.

Diabetic Infection and Gangrene.
By Dr. Manuel Gardberg.
Discussed by Dr. James D. Rives.

The Role of the Semilunar Cartilage in the Football Knee.
By Dr. H. Theodore Simon.
Discussed by Dr. Lucian H. Landry.

The annual Longer Life Week sponsored by the Orleans Parish Medical Society was observed May 18-23, and was devoted entirely to the subject of acute appendicitis. The following committee worked very hard to make this week a success: Dr. Urban Maes, Chairman, Drs. Frederick F. Boyce and Paul B. Cameron, Vice-Chairmen, and Drs.Nathan H. Polmer and George D. Feldner as

the other members. Civic and luncheon clubs, high schools, universities, members of the Society, druggists and business houses cooperated in this movement. Stickers and posters were sent to the druggists and business houses. Small stickers were sent to the doctors to be placed on their bills:

WARNING

In the presence of abdominal pain
Never take laxatives or purgatives.
Take nothing by mouth.
Call your family doctor.
The Orleans Parish Medical Society

Members of the Society gave talks over the radio, and before schools and luncheon clubs, and we wish to thank every one of them for their cooperation.

In the Bulletin of the Orleans Parish Medical Society dated May 11, 1936, an editorial appeared regarding telephone calls for subscriptions of all kinds. When such calls come in, the doctors are urged to use the same answer, "Sorry—not interested", and it is felt that the persons who are employed by the higher ups in these rackets to sit down and call up every doctor in the City of New Orleans would soon report that the field is not as fertile as it was always believed to have been. Of course some discrimination will have to be practiced, but we feel sure that every member of this Society knows the type of solicitor of whom we are speaking.

Dr. Robert A. Strong was a guest speaker before the Arkansas State Pediatric Society in Hot Springs on Monday, April 27.

Drs. I. M. Gage and Alton Ochsner attended the meetings of the American Association for Thoracic Surgery at Rochester, Minnesota and the American Surgical Association at Chicago.

Dr. John Signorelli was a guest at the Alabama State Medical Society which met in Montgomery.

The following members of the Orleans Parish Medical Society attended the recent meeting of the American Medical Association: Drs. Chas. A. Bahn, C. C. Bass, Elizabeth Bass, Geo. C. Battalora, Paul B. Cameron, Jos. A. Danna, L. R. DeBuys, Roy E. de la Houssaye, I. M. Gage, T. T. Gately, Julian Graubarth, James K. Howles, R. H. Kampmeier, Jerome E. Landry, Francis E. LeJeune, I. I. Lemann, A. L. Levin, John H. Musser, Alton Ochsner, Geo. W. Robinson, P. B. Salatich, Wm. H. Seemann, Thos. B. Sellers, Wilbur C. Smith, Robert A. Strong, N. F. Thiberge, J. Ross Veal, Emmerich von Haam and H. W. E. Walther.

Drs. Rigney D'Aunoy and Emmerich von Haam received the gold medal of the American Society of Clinical Pathologists for the work they have done in research on lymphogranuloma inguinale.

Dr. L. R. DeBuys was installed as President of the American Academy of Pediatrics.

Three New Orleans doctors were made chairmen of sections of the American Medical Association: Dr. John H. Musser, Chairman of the Section on Medicine; Dr. Alton Ochsner, Vice-Chairman, Section on Surgery; and Dr. H. W. E. Walther, Chairman of the Section on Urology.

Dr. Urban Maes attended the meetings of the Medical Society of the State of New York in New York City (where he was one of the guest speakers), the American Surgical Association in Chicago, and the Society of Clinical Surgery at the Mayo Clinic in Rochester.

The following doctors were elected to Membership:

ACTIVE MEMBERSHIP

Dr. Edwin R. Guidry

INTERNE MEMBERSHIP

Drs. Otis F. Gay, Bruno F. Mancuso, Stuart N. Nicholas and Jos. A. Vella

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It is with the deepest regret that we report the loss by death of two of our Active Members: Dr. Foster M. Johns, our First Vice-President, and Dr. J. W. Newman.

TREASURER'S REPORT

ACTUAL BOOK BALANCE: 3/31/36	$2,707.42
April credits	711.11
TOTAL CREDITS:	$3,418.53
Expenditures:	807.26
ACTUAL BOOK BALANCE: 4/30/36	$2,611.27

LIBRARIAN'S REPORT

During April, 46 books were added to the Library. Of these 9 were received by gift, 19 by binding and 18 from the New Orleans Medical and Surgical Journal. Notation of new titles of recent date is given below.

The Library has loaned 787 books and journals to doctors during the month, or approximately 1½ to each member of the Society. In addition 894 volumes were loaned to students for overnight use, making a total of 1681. These figures do not include the great use of books and journals within the Reading Rooms.

On request of physicians, members of the staff have collected material on the following subjects in April—

Endemic typhus.
Injuries of knee.
Hormone therapy.
Carcinoma of common bile duct.
Angiosarcoma.
Injuries in sport.

Influence of phosphates on the rate of absorption in glucose.
Treatment of Fordyce disease.
Books for the blind.
Nephrosis in children.
Epidemiology of typhus.
Plantation medicine.
Fibroma of ovary.
Biography of Dr. Bennett Dowler.
Medical library work.
Diagnosis of typhus.

NEW BOOKS—April

American Otological Society—Transactions. 1935.

U. S.—Navy Department—Statistics of Diseases and Injuries in U. S. Navy. 1934.

Crossen, H. S.—Diseases of Women. 1935.

Krafft-Ebing, R. von—Psychopathia Sexualis. 1935.

Marriott, W. M.—Infant Nutrition. 1935.

Ross, J. S. and Fairlee, H. P.—Handbook of Anesthetics. 1935.

Rosenau, M. J.—Preventive Medicine and Hygiene. 1935.

Pharmacopoeia of the U. S. 11th ed. 1936.

Taussig, F. J.—Abortion, Spontaneous and Induced. 1936.

Christopher, Frederick, ed.—Textbook of Surgery. 1936.

Solomon, Charles—Prescription Writing and Formulary. 1935.

Dodge, C. W.—Medical Mycology. 1935.

Becker, S. W.—Common Diseases of the Skin. 1935.

Bargen, J. A.—Management of Colitis. 1935.

Johnson, W. M.—True Physician. 1936.

Boyd, William—Pathology of Internal Diseases. 1935.

Bannister, H.—Psychology and Health. 1935.

Beaman, A. G.—Doctor's Odyssey. 1935.

Duke University—Law School—Expert Testimony. 1935.

Lord, F. T. and Heffron, Roderick—Lobar Pneumonia and Serum Therapy. 1936.

Hayner, J. C.—Regional Anatomy. 1935.

U. S.—Census Bureau—Mortality Statistics. 1933.

Rubenstein, I. H.—Legal Aspects of Christian Science. 1935.

Matsner, E. M.—Technique of Contraception. 1936.

Julius Rosenwald Fund—New Aspects of Medical Service. 1936.

N. Y. Post-Graduate Medical School and Hospital—Collected Studies of Department of Pathology and Bacteriology. 1930-35. 1936.

Gilbert C. Anderson, M.D., Secretary.

LOUISIANA STATE MEDICAL SOCIETY NEWS

THE LAKE CHARLES MEETING

The Lake Charles Meeting is a thing of the past but the memory of the splendid scientific papers and more particularly the recollection of the delightful time members of the State Society had, will linger. The entertainments were delightful and the reception to visiting doctors by the Lake Charles men was cordiality itself.

Dr. R. P. Howell did splendid work as General Chairman of the meeting. The members of the sub-committees were assiduous in their attention to the visitors and did everything to make their visit not only profitable from an educational point of view but enjoyable from a social aspect. The members of the State Society who attended this meeting certainly owe a debt of gratitude to the Chairmen of the Committees and their Committeemen.

Might you invite us again?

The Louisiana Gynecological and Obstetrical Society was permanently organized in Lake Charles, Louisiana, at the State Medical Society Meeting.

Dr. Peter Graffagnino was elected President, Dr. E. L. King, Vice-President, Dr. Walter Levy, Secretary-Treasurer, and Dr. H. B. Alsobrook was appointed Chairman of the program.

The organization is planned to sponsor better obstetrics and gynecology in the state. The membership will be limited to fifty members and only those belonging to some gynecological or obstetrical club or the American College of Surgeons are eligible for membership.

The next meeting will be held in conjunction with the State Medical Society in Monroe in 1937..

NEWS ITEMS

Dr. Lawrence R. DeBuys was honored by election as President of the American Academy of Pediatrics.

Dr. H. W. E. Walther was selected as Chairman of the Section on Urology at the recent meeting of the American Medical Association.

Dr. Alton Ochsner was elected to the office of Vice-Chairman of the Section on Surgery by the American Medical Association.

The First National Conference on Fever Therapy will be held at Columbia University, New York City, September 29-October 3, 1936.

During the course of the year 1936 the following

International Congresses will take place in Vienna: The International Congress of Dentistry, the Congress of Roentgenologists, the Congress of the International Society for Urology, the Medical Hydrology Congress and the International Congress of Catholic Physicians.

Dr. John H. J. Upham, Columbus, Ohio, for many years on the Board of Trustees of the American Medical Association, was honored by the organization in being selected President-Elect for the ensuing year.

Dr. Charles Gordon Heyd of New York was unanimously elected Vice-President of the American Medical Association at the Kansas City Meeting, May 14. Owing to the sad illness of Dr. Mason, Dr. Heyd will presumably succeed to the Presidency.

Assistant Surgeon Ralph W. Carr of the U. S. P. H. S. has been ordered to the U. S. Marine Hospital, New Orleans, for duty.

Medical Director L. L. Lumsden, now in New Orleans, was ordered to the University of Michigan to assist in a training course for the personnel to be employed under the Social Security program.

The Cornell University short course in hospital operation will be held in the two weeks beginning June 29.

FACULTY OF THE TULANE GRADUATE SCHOOL OF MEDICINE

The following attended the meeting of the Louisiana State Medical Society at Lake Charles, La., April 27, 28 and 29, when Dr. H. W. Kostmayer, Dean and head of the department of gynecology, was inducted as president of that society:

Jas. E. Bailey	E. L. Leckert
E. R. Bowie	J. D. Martin
M. Earle Brown	Harry Meyer
D. C. Brown	Neal Owen
W. R. Buffington	Rawley M. Penick
L. L. Cazenavette	Wm. H. Perkins
Wm. B. Clark	Jno. G. Pratt
Isidore Cohn	Wm. H. Seemann
E. McC. Connely	T. B. Sellers
Allen C. Eustis	D. N. Silverman
F. L. Fenno	P. T. Talbot
E. S. Hatch	M. T. Van Studdiford
C. S. Holbrook	W. A. Wagner
	Willard R. Wirth

Dr. Walter E. Levy, chief of the division of obstetrics, addressed the meeting, his subject being "A Comparative Gynecological and Obstetrical Study of the White and Colored Races."

Dr. Walter J. Otis, assistant professor of clinical neurology and of clinical psychiatry, attended a meeting of the American Association for the Study of Mental Deficiency and the American Psychiatric Association for the Study of Mental Deficiency and the American Psychiatric Association held at St. Louis, Mo., the week beginning May 4, 1936.

Dr. H. W. Kostmayer, Dean and head of the department of gynecology, also attended the meeting of the American Board of Obstetrics and Gynecology, and a meeting of the American Medical Association held at Kansas City, Mo., May 11 to the 15.

Dr. Elizabeth Bass attended the meeting of the Medical Women's National Association and the American Medical Association held at Kansas City, Mo., May 11 to the 15th.

INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the week ending April 18 there were reported 258 cases of influenza, 97 of pneumonia, 53 of malaria, 47 of whooping cough, 41 of measles, 36 of pulmonary tuberculosis and 13 each of cancer and diphtheria. There were 5 cases of epidemic cerebrospinal meningitis reported from Orleans Parish this week, 4 of which were imported. The following week, ending April 25, there was a marked decrease in the number of cases of influenza, there being only 99 listed. Other diseases of prominence include 49 of measles, 41 of pneumonia, a marked decrease, 39 of whooping cough, 34 of pulmonary tuberculosis, 24 each of malaria and syphilis and 18 of cancer. Of the unusual diseases, 1 case of dengue fever was reported from Webster Parish, one case of encephalitis from East Baton Rouge and 1 case of smallpox from Orleans. For the week ending May 2, 112 cases of syphilis led the list of reported diseases followed by 67 of whooping cough, 52 of measles, 46 of influenza, 41 of pneumonia, 30 of pulmonary tuberculosis, 22 of cancer and 13 of scarlet fever. During the week there were also reported 5 cases of cerebrospinal meningitis from Orleans Parish, 4 of which were imported. Two cases of tularemia were reported from West Carroll Parish. For the week ending May 9 there was a surprising increase in the cases of influenza and pneumonia, there being 310 of the former and 96 of the latter. These diseases were followed numerically by 78 of whooping cough, 63 of measles, 39 of cancer, 34 of pulmonary tuberculosis, 33 of malaria, 25 of syphilis and 11 of diphtheria. A case of smallpox was reported from Madison Parish, 1 of tularemia from Bienville and 2 of cerebrospinal meningitis; 1 from Orleans

and 1 from Lafayette. An explanation of the large number of cases of influenza reported the 19th week of the year and the 20th week, ending May 16, when 508 cases were listed, was due to the fact that many were delayed reports for March and April, according to a footnote. In the report for the 30th week of the year, there was still a goodly number of cases of pneumonia reported, 68 appearing on the list, followed by 43 of whooping cough, 37 of malaria, 27 each of pulmonary tuberculosis and measles, 17 of cancer, 12 of diphtheria and 11 of chickenpox. Of the 3 cases of cerebrospinal meningitis reported from Orleans Parish, 1 was imported. Another occurred in Concordia Parish, while in Calcasieu Parish a case of undulant fever was listed.

HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census reports that for the week ending April 18 there were 183 deaths in the city, distributed 110 white and 73 colored. The death rate for the group as a whole was 19.9; for the white race 16.8 and for the negro 27.4. The infant mortality rate this week was 139, distributed about equally between the two races. For the following week, which came to an end April 25, there was a slight reduction in the number of deaths, there being 171 citizens in the city who passed away during that week, making a death rate of 18.6. Of these 107 were white individuals with a rate of 16.4 and 64 colored whose rate in turn was 24. The infant mortality rate this week was 110 with the negro rate about double that of the white. The number of deaths in the city jumped up the next week which closed May 2. There were 192 deaths divided 119 white and 73 colored, with the rate for the three groups being 20.9, 18.2 and 27.4, respectively. The infant mortality rate was 99. Health conditions in the city were evidently improved for the week which ceased May 9. There were 171 deaths giving a rate of 18.6 of whom 108 were white, the rate being 16.5 and 63 negroes whose rate was 23.6. The infant mortality rate this week was 105.

MEDICAL LIBRARY ASSOCIATION

The Thirty-eighth Annual Meeting of the Medical Library Association will be held in St. Paul, Minnesota, June 22 and 23, 1936, and in Rochester, Minnesota, June 24. Sessions will be held at the Ramsey County Medical Society, New Lowry Medical Arts Building, St. Paul, and at the Mayo Clinic, Rochester.

The program will include addresses, discussions, and demonstrations on library procedure, medical history and literature.

This Association consists of about 175 of the medical libraries of this country and Canada, together with their librarians and a group of supporting members who are physicians interested in the advancement of medical libraries.

The officers of the Association are as follows:

President, Dr. W. W. Francis, Montreal.

Vice-President, Dr. A. H. Sanford, Rochester, Miss.

Secretary, Miss Janet Doe, New York.

Treasurer, Miss Mary Louise Marshall, New Orleans.

Chairman of Executive Committee, Miss Marjorie J. Darrach, Detroit.

All interested in the development of medical libraries and a wider knowledge of medical literature are invited to attend.

SPECIAL NOTICE

Special attention is directed to physicians leaving the city to the fact that appropriate announcement in the professional cards can be arranged for $2.00 per insertion. Communicate with our office in regard to details.

WOMAN'S AUXILIARY
Louisiana State Medical Society
Convention News

The Woman's Auxiliary to the Louisiana State Medical Society met in Lake Charles April 28 and 29 with a total registration of 114. Headquarters for this meeting were in the Majestic Hotel where the pre-convention Executive Board meeting was held at 9:00 a. m. April 28, Mrs. Hermann B. Gessner, presiding. Following this meeting there was a luncheon in the hotel when the speakers of the occasion were Doctors C. P. Gray, H. W. Kostmayer and Walter Moss. Later in the afternoon all roads led to the very beautiful home of Mrs. Mathilda Gray where the guests were entertained at a perfectly lovely tea, the charm and hospitality of which was truly Southern and will be long remembered as a most delightful afternoon, not only by the ladies who attended, but by the many doctor-husbands who also ventured forth to enjoy the social hour so well planned.

It was quite gratifying at the President's Reception that same night, to know that everyone (that is, almost) attended the dance—they came early and stayed late—and perhaps the secret of the success of the reception was the very splendid band that furnished the rhythmic music for dancing feet.

The general meeting of the auxiliary was held at 9:00 a. m. Wednesday, April 29 in the hotel with Mrs. Gessner, President, again presiding. At this meeting the usual reports were read, accepted and filed. A very beautiful motion was introduced by Mrs. Jamieson and carried that "the auxiliary have a committee on memorials and that fitting tribute be paid deceased members at the general meeting."

The new officers for 1936-37 were then elected as follows:

President-Elect, Mrs. George D. Feldner, New Orleans.

First Vice-President, Mrs. F. G. Ellis, Shreveport.

Second Vice-President, Mrs. T. H. Watkins, Lake Charles.

Third Vice-President, Mrs. E. B. Middleton, Homer.

Fourth Vice-President, Mrs. R. R. Arceneaux, Welsh.

Recording Secretary, Mrs. C. G. Cole, New Orleans.

Treasurer, Mrs. C. P. Gray, Monroe.

Parliamentarian, Mrs. R. T. Lucas, Shreveport.

Mrs. James Byron Vaughn, the new President, then took the chair with Mrs. Gessner introducing her in her usual charming and gracious manner. This meeting was followed by a "Bowery luncheon" in the hotel with all the atmosphere of a bowery restaurant; checkered tablecloths on the table and oil-lamps all around, with Mrs. Walter Moss acting again as toastmistress in her own delightful way.

There is much reminiscing among those who went to Lake Charles, and echoes are still being heard of the delightful cocktail party in the garden of their home at which Dr. and Mrs. T. H. Watkins entertained.

A perfect ending to a perfect meeting was the barbecue picnic at the Country Club from 5 to 7 with dancing from 7 to 9 where one met all one's friends, for nobody missed any of the well-planned, whole-heartedly enjoyed parties into which so much thought and friendliness was put. The kindness, charm and hospitality and the efforts of the hostesses to make everyone feel perfectly at home will long be talked about by those fortunate enough to have gone to Lake Charles and those who could not go will regret that so much spirit of cordial welcome and friendliness was missed by them.

To Mrs. Hermann B. Gessner, the retiring President of our Auxiliary go our very kindest wishes and sincerest thanks for her untiring efforts and many hours of efficient labor she has devoted to us, and we trust that her term of office has been enjoyed as much by her as we have enjoyed her advice and guidance.

To Mrs. Vaughn, our new President, we extend greetings and good wishes for a successful term and a sincere promise of co-operation and unity.

Mrs. George D. Feldner, Chairman,
Press and Publicity.

ORLEANS PARISH

The last meeting of the 1935-36 season of the Woman's Auxiliary to the Orleans Parish Medical Society was held Wednesday, May 13. At this meeting, the annual reports were read, and the President's report which is always the most enjoyed, and yet the saddest, was very enthusiastically received. Mrs. W. Rogers Brewster, the retiring President, has been a most diligent officer and has devoted ceaseless and untiring efforts toward the welfare of our organization. Our thanks and good wishes to Mrs. Brewster for a successful year just completed.

The officers for 1936-37 were elected at this meeting with Mrs. W. P. Gardiner as President, and

President-Elect, Mrs. Jules Myron Davidson.
First Vice-President, Mrs. Alton Ochsner.
Second Vice-President, Mrs. D. N. Silverman.
Third Vice-President, Mrs. George D. Feldner.
Fourth Vice-President, Mrs. Clyde Brooks.
Recording Secretary, Mrs. H. Vernon Sims.
Corresponding Secretary, Mrs. John S. Dunn.
Treasurer, Mrs. Aynaud F. Hebert.
Parliamentarian, Mrs. Frank C. Hava.
Historian, Mrs. A. Mogabgab.
Publicity Chairman, Mrs. Edgar Burns.

The new President and officers were welcomed by the assembly.

In conjunction with the local chapter of the Red Cross, First-Aid classes will be given during the summer months, and a large number of ladies have already enrolled for these courses.

A garden-tea followed the meeting with exchanges of "adios" and "good-byes" until the Fall and the beginning of auxiliary activities begin again.

Mrs. Edgar Burns, Publicity, Chairman.

BOOK REVIEWS

Law and Contemporary Problems: Expert Testimony. Durham, N. C. Duke University School of Law, 1935. pp. 128. Price 60c.

This published quarterly comes from the School of Law, Duke University—Vol. 2, No. 4. As the title discloses, the contents deal with the following:

Development of the use of expert testimony;

Alternative to the battle of experts;

Hospital examination of criminal defendants before trial;

History and operation of the Briggs Law of Massachusetts;

Psychiatric testimony in probate proceedings;

The qualification of psychiatrists as experts in legal proceedings;

Medical testimony in personal injury cases;

Expert medical testimony in compensation proceedings;

Reasons and reasoning in expert testimony;

The admissibility of scientific evidence in criminal cases;

The expert witness in criminal cases in France, Germany and Italy; and

The compensation of expert witnesses.

The volume is replete with bibliography referable to the contents under each heading, displaying an inexhaustible research in collateral data pertaining to the subjects referred to.

The question of expert testimony is a vital one inasmuch as the expert should be properly qualified and intelligently trained. This situation is given some comment throughout the volume in the fields where expert testimony is necessary to evaluate the results of the case. Great stress is laid upon the admitting to such a procedure those properly qualified as neuropsychiatrists wherein an investigation is done previous to their being appointed to examine and present their findings of cases referred to them. This in a measure is true in some parts of the United States. However, in other parts those who are untrained and not fully qualified or fitted are permitted to give evidence as pseudo-alienists or experts, thereby causing undue criticism and at times ridicule to fall upon the field of medicine as a whole and neuropsychiatry in particular. The question of the Briggs Law of Massachusetts is covered rather fully and completely.

Still more radical innovations are necessary, in the reviewer's opinion, properly to place the status of the expert, whether he be the head of an institution caring for mental or nervous disorders who is called upon to testify, or whether he is a practitioner extra-mural, inasmuch as throughout the United States there are a number of institutions whose superintendents are not qualified professionally nor are they members of the standard organizations dealing with mental and nervous diseases, neither have their qualification or status been determined by the recently formed American Board of Psychiatry and Neurology.

The articles are well written, not tiring to read —in fact, are interesting and retain the attention. Much credit is due the editor and contributors.

WALTER J. OTIS, M. D.

Abortion—Spontaneous and Induced: By Frederick J. Taussig, M. D., St. Louis, C. V. Mosby Company, 1936. pp. 536.

An excellent and much needed volume dealing with every phase of abortion, including a chapter on "Abortion in Animals" written by Walter Long Williams. Every topic, from the anatomy and physiology of early pregnancy to the treatment of abortion and the complications that may arise, are dealt with in an exhaustive and authoritative manner. Statistics relative to every aspect of abortion are presented and properly evaluated. A review of legalized abortion in the Soviet Union is included as well as a chapter dealing with legal views as regards detachment of the expulsion of the previable ovum. In the last chapter proposed methods for the control of abortion are discussed.

A more complete or valuable volume on this subject cannot be found, for not only does it include the medical side of the question but a discussion from the social, eugenic, and legal points of view as well. This volume is recommended to the medical man irrespective of his speciality and also to the social worker, the eugenist, lawmaker, and clergy.

CONRAD G. COLLINS, M. D.

Medical Mycology: Fungous Diseases of Men and other Mammals: By Clarence Williams Dodge, St. Louis, C. V. Mosby Co., 1935. pp. 900, with 142 illus. Price $8.00

This outstanding book presents the first really comprehensive and authoritative compilation of mycologic data on pathogenic fungi that has been published in America. Short chapters on general morphology, physiology, cultivation, isolation, microscopy and nomenclature of the fungi serve as an introduction to an enormous text describing in orderly detail a very large number of pathogens. The actinomycetes are included. A serious attempt is made correctly to classify the fungi, to give due credit for priority of description, and, to present a complete bibliography.

The descriptions of the families, genera and species are quite complete. For each species the synonyms, place of isolation, pathogenicity for laboratory animals, morphology and cultural characteristics are given.

From a medical viewpoint this book is of great value as a comprehensive reference for the laboratory worker. The only criticism that may be offered is the meagerness of descriptions of fungal forms as found in lesions where identification and proof of pathogenicity must first be established.

FOSTER M. JOHNS, M. D.

Free Medical Care: *Socialized Medicine*: By E. C. Buehler. New York City, Noble & Noble, 1935. pp. 360. Price $2.00.

Economic problems in which one is very directly interested are especially difficult to evaluate impartially. The author of this volume has helped me and, I believe, will help others discuss this subject more intelligently. "Free Medical Care" consists of about twenty-five chapters, interestingly written by leading authorities for and against socialized medicine, and is intended primarily for the layman.

The arguments for and against free medical care are presented in a condensed form especially adapted for debate on the subject. The following

interesting statements are selected at random:

Approximately one million persons are engaged in medical care of different sorts, from which their livelihood is derived. About three and one half billion dollars is spent annually in this country for medical care of different sorts. Only 3 per cent of the seven hundred fifty thousand persons known to have syphilis in this country receive treatment during the primary stage.

A series of questions and answers is presented and there is a complete bibliography of about forty pages. The interesting articles for and against socialized medicine written by well-known writers such as Fishbein, Duffus, et al, are followed by the majority and minority reports of the Committee on the Cost of Medical Care, which aroused no small amount of discussion several years ago. The majority report recommended further organization of all medical personnel, preferably around hospitals, extension of the Public Health service; a group payment plan; coordination of state, local, and community agencies; and numerous suggestions on medical education. The minority report recommended that government competition in medical practice be discontinued; that the government relieve the medical profession of the burden of caring for the indigent; that local communities work out their own health prblems; that the general practitioner be restored to a more prominent place in medical practice; that corporate practice, especially when financed through intermediary agencies, be persistently opposed; that radically new methods of rendering medical care be not rashly attempted; and that each county medical society work out the health problems of its community.

Completely socialized medicine appears to me so far in the future that none need fear its effect on his livelihood. There will always be a demand for all three types of medical service—free, inexpensive and expensive—and there will always be those who will meet these demands.

The principal criticism of the medical profession seems to be that we have not wisely invested the patient's dollar in the purchase of better health. How true this is, and what, if anything should be done about it, are problems which should be given unprejudiced thought.

I will appreciate any comment on this book by those who may read it, in order to get a cross section of medical opinion on this problem, which is attracting unceasing attention in the profession and outside of it.

CHAS. A. BAHN, M. D.

Prescription Writing and Formulary: The Art of Prescribing: By Charles Solomon, M. D. Philadelphia. J. B. Lippincott Company, 1935. pp. 351. Price $4.00.

So little attention is given to the subject of prescription writing in medical literature and unfortunately even in college teaching, that it is a real privilege to review a worthwhile contribution to this subject.

The volume contains much new subject matter and a large portion of this text is presented in an entirely original way, and one which is quite attractive. In fact, the whole subject is approached in a manner different from anything that has yet come under my observation. There is considerable material which is not even included in any other work available.

The history of prescription writing, while brief, is interesting. This is followed by a discussion of general considerations such as ethics and legal restrictions. The section on the Latin of prescription writing is condensed and an effort has been made to give only that part which is of practical value. As to the formulary, the criticism might be offered that the prescriptions are written out in full, that is, with the full Latin terminations, while in practical work these are probably best abbreviated. Those of us who have only a meager knowledge of Latin at least avoid in this way the possibility of using incorrect terminations.

A new Pharmacopoeia has recently appeared and we look forward to a revised edition of Dr. Solomon's text which will include not only the items but the nomenclature of U. S. P. XI.

The index is extensive and shows effort and judgment. As a whole this volume may be recommended to anyone interested in the art and science of writing prescriptions.

O. W. BETHEA, M. D.

International Clinics, v. 1, 46th Series (March, 1936. Philadelphia, J. B. Lippincott Co., 1936. pp. 314. Price $2.50.

As usual in this volume will be found essays that are of great importance to the modern physician. Such diverse subjects as phosphatase activity, basal tuberculosis and advances in surgery for 1935 are but a few of the several comprehensive contributions to contemporary medicine. This current addition to the International Clinics series compels the critic to concede the claims of its editors that they have again contributed a superior collection of theses to our better and worthwhile literature.

I. L. ROBBINS, M. D.

Psychology and Health: By H. Banister, M. S., Ph. D., New York. The MacMillan Company, 1935. pp. 256. Price $2.50.

This is a book well worth anybody's reading. In his preface the author makes a statement that every physician should know something about the psychological processes which influence the course of every life, and that his book is primarily intended for the use of general practitioners and medical students. He then proceeds to present the subject in an orderly and systematic manner, first

giving a sufficient explanation of the terminology, symptomatology and other details for anyone to follow his main discussion of conditions and reactions with intelligence and understanding, especially as this discussion is shorn of highly technical language and is concise and to the point.

In dealing with psychiatric problems, he approaches them with common sense, and carefully avoids any of the extravagant claims of one group or the other, explaining clearly, concisely and in a way which would be of benefit to any intelligent person.

In short, the book is one which may be read with profit by any physician, even a psychiatrist, or by any lay person who has to deal with the complicated problems of life.

EDMUND CONNELY, M. D.

Commoner Diseases of the Skin: By S. William Becker, M. D., M. S. New York, National Medical Book Co., Inc., 1935. pp. 283. Price $3.00

Commoner Diseases of the Skin by S. William Becker, M. D., is an original presentation of some of the groups of cutaneous diseases which the general practitioner frequently encounters. It is not elementary enough for the undergraduate student as it does not present the facts in an outlined manner, which seems to be more adaptable to the beginner. I consider the book an excellent supplement to either a compend or text-book of dermatology. A good part of the book is concerned with toxic dermatoses of both dermal and epidermal origin. More attention is paid to the neurodermatoses than one would expect in such a short manuscript. The diagramatic representation of neurocirculatory instability is very concise and original.

A rather short chapter is presented of the ever increasing dermatomycoses, in fact, for such a rapidly growing field of dermatology more importance could well be stressed.

While I consider the work a very good supplementary reading for the general practitioner and one containing many original and well chosen points, I hesitate to recommend it for class room study for the beginner, as the classifications are a bit unusual, viz: The papulo-squamous eruptions may well be toxic eruptions as well, and then too many of the dermatoses of uncertain etiology are classified in the same groups as those whose origin are well established.

The formulary is good and while not voluminous contains the essential medicaments for the average dermatological case.

I think Dr. Becker should feel highly pleased with his book and I recommend it to the general practitioner as an addition for his reference shelf.

J. K. HOWLES, M. D.

PUBLICATIONS RECEIVED

Dr. Duran Arrom: Enfermedades De Las Coronarias. Angina De Pecho.-Infarto E Insufiencia Cardiaca. Instituto De Medicina Practica. Asturias, 89.—Barcelona. 1936.

Hale, Cushman & Flint, Boston: Bewildered Patient by Marian Staats Newcomer, M. D.

The MacMillan Company, New York: The Normal Diet and Healthful Living by W. D. Sansum, M. D., R. A. Hare, M. D. and Ruth Bowden, B S.

The C. V. Mosby Company, St. Louis: Allergy of the Nose and Para-nasal Sinuses by French K. Hansel, M. D., M. S.

W. B. Saunders Company, Philadelphia: Clinical Heart Disease, by Samuel A. Levine, M. D., F. A. C. P. The Surgical Clinics of North America. February, 1936. Vol. 16—No. 1. Chicago Number.

Richard R. Smith, New York: New Faces—New Futures. Rebuilding Character with Plastic Surgery by Maxwell Maltz, M. D.

Charles C. Thomas, Springfield: Parenteral Therapy by Walton Forest Dutton, M. D. and George Burt Lake, M. D. A Textbook of Surgery, by John Homans, M. D. Mechanics of Normal and Pathological Locomotion in Man by Arthur Stindler, M. D., F. A. C. S.

William Wood and Company, Baltimore: A Synopsis of Physiology by A. Rendle Short, B. Sc., M. D., F. R. C. S. and C. I. Ham, M. B., B Ch. F. R. C. S. (Ed.) Second Edition edited by C. L. G. Pratt, M. Sc., M. D.

The Williams & Wilkins Company, Baltimore: The Harvey Lectures by Dr. Wm. Bosworth Castle, Dr. William Cumming Rose, Dr. Wilbur A. Sawyer, Dr. Alfred N. Richards, Dr. E. C. Dodds, Dr. G. V. Anrep, Dr. Francis G. Blake, Dr. John H. Northrop. Series XXX. Medical Papers Dedicated to Henry Asbury Christian. Edited by Robert T. Monroe.

P. Blakiston's Son & Co., Inc., Philadelphia: The Diabetic Life; Its Control by Diet and Insulin by R. D. Lawrence, M.A., M.D., F.R.C.P. (London),

J. B. Lippincott Company, Philadelphia: Passive Vascular Exercises and The Conservative Management of Obliterative Arterial Diseases by Louis G. Herrmann, A.B., M.D.

W. B. Saunders, Philadelphia: Diseases of the Respiratory Tract by Contributors from The New York Academy of Medicine.

Charles C. Thomas, Springfield: Collected Writings Vol. I and Vol. II by Alfred F. Hess.